

4.11.14 Order Manager Command Line Utility

The Order Manager Command Line utility provides a mechanism by which the ECS Operations Staff can submit order requests into the Order Manager System (OMS) database directly without knowing whether the Order Manager Server is up or down. The order request submitted by the Command Line utility is in ODL format, which conforms to the Product Request ODL protocol in the ICD Between the EOSDIS Core System (ECS) and the Version 0 System for Interoperability, with a few extensions.

4.11.14.1 Quick Start Using the Order Manager Command Line Utility

To execute the Order Manager Command line utility, use the command line interface command below.

4.11.14.1.1 Invoking Order Manager from the Command Line Interface

To execute the Order Manager from the command line interface, use the Command Line utility syntax provided below:

```
EcSrOmCliDriverStart <MODE > <rootname of ODL files> <numRequest> [<submissionInterval>  
<dbRetries> <dbRetryInterval>]
```

The mode parameter is required to indicate the mode (i.e., OPS, TS1, or TS2) in which the utility is being run. The command line parameters supported are described in Table 4.11.14-1.

Table 4.11.14-1. Order Manager Command Line Parameters

Parameter Name	Required	Description
rootname of ODL files	Yes	Specifies the full pathname of root name of ODL files. For example, if there are two requests to be submitted concurrently, there must be two ODL files with the same root name, say odl.rqst, but different suffixes "0" and "1" for each file (i.e., there must be two files named odl.rqst.0 and odl.rqst.1 on the disk). The root name of ODL files in this case is <fullpath>/odl.rqst. The program automatically appends those suffixes for you, starting from 0.
numRequest	Yes	Specifies the number of requests the Command Line utility submits concurrently.
submissionInterval	No	Specifies how many seconds apart the requests are submitted. The default value 0 means all the requests are submitted with no submission interval (i.e., at the same time).
dbRetries	No	Specifies how many db retries the utility tries when the OMS database is inaccessible. The default value is 2 (times).
dbRetryInterval	No	Specifies how many seconds apart between retries when the OMS database is inaccessible. The default value is 10 (seconds).

4.11.14.1.2 Order Manager Command Line Utility Configuration File

The Command Line Utility has an associated configuration file with values stored in a basic PARAMETER = VALUE format. Table 4.11.14-2 describes its contents:

Table 4.11.14-2. Order Manager Configuration File Parameters

Parameter Name	Value Description
Name	EcOmSrCliDriver
ProgramID	1300005
ApplicationID	1300000
Site	DAAC Name
SubSystem	OMS
MajorVersion	1
MinorVersion	0
AppLogSize	The maximum ALOG size
AppLogLevel	ALOG level
DebugLevel	Debug log level
Release	B
PrincipalName	EcOmSrCliDriver
SDSRV_SYBASE_SERVER	Name of OMS Sybase SQL Server
SYBINTERFACES	Location of Sybase open client library interface file
DSSSrUNIXEnv	SYBASE DSQUERY
DBMAXRESULTS	Maximum database return rows
DBNAME	OMS database name
DBPASSWDSEED	1300005 (the seed used to get Command Line utility database login password)
DBUSERNAME	OmSrCliDriver (the database login name of Command Line utility)
MAX_DB_CONNECTIONS	The maximum database connections Command Line utility uses to connect to the OMS Database
DSQUERY	Name of SQS Server
SDSRV_DB_MAX_JOINS	Maximum number of database join operations
DSSSrEnv_DB	DBUSERNAME DBPASSWDSEED DBNAME DBMAXRESULTS SYBINTERFACES SDSRV_SYBASE_SERVER SDSRV_DB_MAX_JOINS
DSSSrEnv	\$DSSSrEnv_DB

4.11.14.1.3 ODL Template File

There are brackets ([]), and braces ({ }) around some of the lines and groups. The brackets mean it is optional and subject to change its contents. The braces mean it is not optional but subject to change its contents. The lines or group of lines with no brackets or braces around them mean: “do not change them.”

To use the template file:

Step 1. Copy the template file to a new file.

Step 2. Customize those lines and groups with the brackets or braces in the new file.

Step 3. Remove the brackets and braces around the lines and groups from the new file.

4.11.14.1.4 ODL Template File for “FtpPull” Media Type

```
GROUP = PRODUCT_REQUEST
MESSAGE_ID = "B1027711830"
[REQUEST_ID = "37475:27364"]
```

The above line is optional. If it is there, the value part must be in the format of “order id:request id” which you retrieve from the MSS database, in this case <order id>=37475 and <request id>=27364. If it is not there, command line utility creates an order id and request id for this request.

```
DATA_CENTER_ID = "ECS-TEST"
[ECS_AUTHENTICATOR = "labuser"]
```

The above line is optional. If it is there, the value ought to be a valid ECS user in the ECS User Registration Database. If it is not there, this request is regarded as an “ECSGuest” user.

```
GROUP = USER_AFFILIATION
CATEGORY = "USA"
TYPE = "GOVERNMENT"
END_GROUP = USER_AFFILIATION
```

```
{
GROUP = CONTACT_ADDRESS
TITLE = ""
FIRST_NAME = "Yu"
MIDDLE_INITIAL = ""
LAST_NAME = "Zhongfei"
ORGANIZATION = ""
ADDRESS = ("abcd")
CITY = "Landover"
STATE = "MD"
ZIP = ""
COUNTRY = "UNITED STATES"
PHONE = "301-925-1042"
FAX = ""
EMAIL = "zyu@eos.hitc.com"
END_GROUP = CONTACT_ADDRESS
}
```

The above group is not optional, but the contents of each line could be customized.

```
{
GROUP = SHIPPING_ADDRESS
TITLE = ""
FIRST_NAME = "Yu"
MIDDLE_INITIAL = ""
LAST_NAME = "Zhongfei"
ORGANIZATION = ""
ADDRESS = ("abcd")
CITY = "Landover"
STATE = "MD"
ZIP = ""
COUNTRY = "UNITED STATES"
PHONE = "301-925-1042"
FAX = ""
EMAIL = "zyu@eos.hitc.com"
```

```
END_GROUP = SHIPPING_ADDRESS
}
```

The above group is not optional, but the contents of each line could be customized.

```
{
GROUP = BILLING_ADDRESS
TITLE = ""
FIRST_NAME = "Yu"
MIDDLE_INITIAL = ""
LAST_NAME = "Zhongfei"
ORGANIZATION = ""
ADDRESS = ("abcd")
CITY = "Landover"
STATE = "MD"
ZIP = ""
COUNTRY = "UNITED STATES"
PHONE = "301-925-1042"
FAX = ""
EMAIL = "zyu@eos.hitc.com"
END_GROUP = BILLING_ADDRESS
}
```

The above group is not optional, but the contents of each line could be customized.

```
GROUP = LINE_ITEM
{DATASET_ID = "LANDSAT-7 LEVEL-0R FLOATING SCENES V002"}
```

This line could be changed to the ESDT long name matching with the granule given in the next line.

```
{PACKAGE_ID = "SC:L70R.002:23420"}
```

This line could be customized in the format of "granule type:ESDT shortname:ESDT version id:db id."

```
PROCESSING_OPTIONS = "Native Granule"
```

```
{MEDIA_TYPE = "FtpPull"}
```

This line could be customized to any media type such as CDROM, DVD, DLT, or 8MM.

```
{MEDIA_FORMAT = "FILEFORMAT"}
```

This line could be changed to match the media type given in the above line.

```
EST_COST = 777.88
```

```
[
GROUP = SUBSET_SPEC
GROUP = SPECIALIZED_CRITERIA
CRITERIA_NAME = "Band Subsetting"
CRITERIA_TYPE = "STRING"
CRITERIA_VALUE = ("QA_BAND2_PRESENT", "QA_BAND3_PRESENT",
"QA_BAND4_PRESENT", "QA_BAND5_PRESENT", "QA_BAND6_PRESENT_F1",
"QA_BAND6_PRESENT_F2", "QA_BAND7_PRESENT", "QA_BAND8_PRESENT")
END_GROUP = SPECIALIZED_CRITERIA
GROUP = SPECIALIZED_CRITERIA
CRITERIA_NAME = "Spatial Subsetting"
CRITERIA_TYPE = "GEO"
CRITERIA_VALUE = "BY_POLYGON_LOC"
GROUP = POLYGON_LOC
TANGENT_LATITUDE = 81.8895
TANGENT_LONGITUDE = 158.423
MAP_PROJECTION_TYPE = "ORTHOGRAPHIC"
LATITUDE = (83.2017, 81.4847, 80.4686, 81.8274)
LONGITUDE = (-175.078, -176.234, 155.986, 151.309)
WG_ZOOM = 2
END_GROUP = POLYGON_LOC
END_GROUP = SPECIALIZED_CRITERIA
GROUP = SPECIALIZED_CRITERIA
```

```

    CRITERIA_NAME = "Scan Line Size"
    CRITERIA_TYPE = "INTEGER"
    CRITERIA_VALUE = 1104
    END_GROUP = SPECIALIZED_CRITERIA
    END_GROUP = SUBSET_SPEC
]

```

This group is optional, indicates the subset option goes along with this granule.

```

GROUP = PATH_ROW_LOC
    PATH = (119)
    ROW = (233)
END_GROUP = PATH_ROW_LOC
GROUP = POLYGON_LOC
    LATITUDE = (70.31, 69.6, 64.78, 65.36)
    LONGITUDE = (-80.91, -85.44, 136.97, 133.18)
    CENTROID_LAT = 81.94
    CENTROID_LON = -170.59
    POLE_INCLUDED = "X"
END_GROUP = POLYGON_LOC
END_GROUP = LINE_ITEM

```

The LINE_ITEM group could be repeated if there are more granules to be ordered in one request.

```

GROUP = MONITOR
    SESSION_ID = "cheyenne.hitc.com:24496:20020726:153027"
    TX_CLIENT = ("1027711832", "939137")
END_GROUP = MONITOR
GROUP = VERSION
    SENDER_VERSION = "imswww-3_4b_6"
    PROTOCOL_VERSION = 3.2
    IMS_STAFF = "1"
END_GROUP = VERSION
[PRIORITY = "HIGH"]

```

This line is optional. The default is LOW with the possible values being LOW, NORMAL, HIGH, VHIGH and XPRESS.

```
[USERSTRING = "TESTFOR"]
```

This line is optional. But if it is there, the length must be less than 80 characters.

```
[NOTIFY = "zyu@eos.hitc.com"]
```

This line is optional. But if it is there, the length must be less than 255 characters.

```
[DDISTNOTIFYTYPE = "MAIL"]
```

This line is optional.

```

END_GROUP = PRODUCT_REQUEST
END

```

4.11.14.1.5 ODL Template File for "FtpPush" Media Type

```

GROUP = PRODUCT_REQUEST
    MESSAGE_ID = "B1027711830"
    [REQUEST_ID = "37475:27364"]
    DATA_CENTER_ID = "ECS-TEST"
    [ECS_AUTHENTICATOR = "labuser"]
GROUP = USER_AFFILIATION
    CATEGORY = "USA"
    TYPE = "GOVERNMENT"
END_GROUP = USER_AFFILIATION
{
GROUP = CONTACT_ADDRESS
    TITLE = ""
    FIRST_NAME = "Yu"
    MIDDLE_INITIAL = ""

```

```

    LAST_NAME = "Zhongfei"
    ORGANIZATION = ""
    ADDRESS = ("abcd")
    CITY = "Landover"
    STATE = "MD"
    ZIP = ""
    COUNTRY = "UNITED STATES"
    PHONE = "301-925-1042"
    FAX = ""
    EMAIL = "zyu@eos.hitc.com"
  END_GROUP = CONTACT_ADDRESS
}
{
  GROUP = SHIPPING_ADDRESS
  TITLE = ""
  FIRST_NAME = "Yu"
  MIDDLE_INITIAL = ""
  LAST_NAME = "Zhongfei"
  ORGANIZATION = ""
  ADDRESS = ("abcd")
  CITY = "Landover"
  STATE = "MD"
  ZIP = ""
  COUNTRY = "UNITED STATES"
  PHONE = "301-925-1042"
  FAX = ""
  EMAIL = "zyu@eos.hitc.com"
  END_GROUP = SHIPPING_ADDRESS
}
{
  GROUP = BILLING_ADDRESS
  TITLE = ""
  FIRST_NAME = "Yu"
  MIDDLE_INITIAL = ""
  LAST_NAME = "Zhongfei"
  ORGANIZATION = ""
  ADDRESS = ("abcd")
  CITY = "Landover"
  STATE = "MD"
  ZIP = ""
  COUNTRY = "UNITED STATES"
  PHONE = "301-925-1042"
  FAX = ""
  EMAIL = "zyu@eos.hitc.com"
  END_GROUP = BILLING_ADDRESS
}
  GROUP = LINE_ITEM
  {DATASET_ID = "JPL-GENERATED ASTER LEVEL 1B DATA - THERMAL IR CHANNELS ONLY
V001"}
  {PACKAGE_ID = "SC:AST_L1BT.001:7644"}
  PROCESSING_OPTIONS = "Native Granule"
  {MEDIA_TYPE = "FtpPush"}
  {MEDIA_FORMAT = "FILEFORMAT"}
  EST_COST = 777.88

```

```

GROUP = ORDER_SPEC
  GROUP = SPECIALIZED_CRITERIA
    CRITERIA_NAME = "FTPHOST"
    CRITERIA_TYPE = "STRING"
    {CRITERIA_VALUE = "origin"}
  END_GROUP = SPECIALIZED_CRITERIA
  GROUP = SPECIALIZED_CRITERIA
    CRITERIA_NAME = "FTPPASSWORD"
    CRITERIA_TYPE = "STRING"
    {CRITERIA_VALUE = "Sept6A02"}
  END_GROUP = SPECIALIZED_CRITERIA
  GROUP = SPECIALIZED_CRITERIA
    CRITERIA_NAME = "FTPPUSHDEST"
    CRITERIA_TYPE = "STRING"
    {CRITERIA_VALUE = "/devdata1/DEV01/PushArea"}
  END_GROUP = SPECIALIZED_CRITERIA
  GROUP = SPECIALIZED_CRITERIA
    CRITERIA_NAME = "FTPUSER"
    CRITERIA_TYPE = "STRING"
    {CRITERIA_VALUE = "labuser"}
  END_GROUP = SPECIALIZED_CRITERIA
  GROUP = SPECIALIZED_CRITERIA
    CRITERIA_NAME = "USERSTRING"
    CRITERIA_TYPE = "STRING"
    {CRITERIA_VALUE = "ABCD"}
  END_GROUP = SPECIALIZED_CRITERIA
END_GROUP = ORDER_SPEC

```

The **ORDER_SPEC** group is designed for specifying all the FtpPush parameters, it must be there for the FtpPush Media Type.

```

GROUP = RANGE_LOC
  NORTH_LATITUDE = 10.12
  WEST_LONGITUDE = -130.12
  SOUTH_LATITUDE = -10.12
  EAST_LONGITUDE = 63.1
END_GROUP = RANGE_LOC
END_GROUP = LINE_ITEM
GROUP = MONITOR
  SESSION_ID = "cheyenne.hitc.com:24496:20020726:153027"
  TX_CLIENT = ("1027711832", "939137")
END_GROUP = MONITOR
GROUP = VERSION
  SENDER_VERSION = "imswww-3_4b_6"
  PROTOCOL_VERSION = 3.2
  IMS_STAFF = "1"
END_GROUP = VERSION
[PRIORITY = "HIGH"]
[USERSTRING = "TESTFOR"]
[NOTIFY = "zyu@eos.hitc.com"]
[DDISTNOTIFYTYPE = "MAIL"]
END_GROUP = PRODUCT_REQUEST
END

```

4.11.14.1.6 ODL Template File for "CDROM" Media Type

```

GROUP = PRODUCT_REQUEST
  MESSAGE_ID = "B1027711830"

```

```

[REQUEST_ID = "37475:27364"]
DATA_CENTER_ID = "ECS-TEST"
[ECS_AUTHENTICATOR = "labuser"]
GROUP = USER_AFFILIATION
  CATEGORY = "USA"
  TYPE = "GOVERNMENT"
END_GROUP = USER_AFFILIATION
{
GROUP = CONTACT_ADDRESS
  TITLE = ""
  FIRST_NAME = "Yu"
  MIDDLE_INITIAL = ""
  LAST_NAME = "Zhongfei"
  ORGANIZATION = ""
  ADDRESS = ("abcd")
  CITY = "Landover"
  STATE = "MD"
  ZIP = ""
  COUNTRY = "UNITED STATES"
  PHONE = "301-925-1042"
  FAX = ""
  EMAIL = "zyu@eos.hitc.com"
END_GROUP = CONTACT_ADDRESS
}
{
GROUP = SHIPPING_ADDRESS
  TITLE = ""
  FIRST_NAME = "Yu"
  MIDDLE_INITIAL = ""
  LAST_NAME = "Zhongfei"
  ORGANIZATION = ""
  ADDRESS = ("abcd")
  CITY = "Landover"
  STATE = "MD"
  ZIP = ""
  COUNTRY = "UNITED STATES"
  PHONE = "301-925-1042"
  FAX = ""
  EMAIL = "zyu@eos.hitc.com"
END_GROUP = SHIPPING_ADDRESS
}
{
GROUP = BILLING_ADDRESS
  TITLE = ""
  FIRST_NAME = "Yu"
  MIDDLE_INITIAL = ""
  LAST_NAME = "Zhongfei"
  ORGANIZATION = ""
  ADDRESS = ("abcd")
  CITY = "Landover"
  STATE = "MD"
  ZIP = ""
  COUNTRY = "UNITED STATES"
  PHONE = "301-925-1042"
}

```

```

    FAX = ""
    EMAIL = "zyu@eos.hitc.com"
    END_GROUP = BILLING_ADDRESS
}
GROUP = LINE_ITEM
{DATASET_ID = "JPL-GENERATED ASTER LEVEL 1B DATA - THERMAL IR CHANNELS ONLY
V001"}
{PACKAGE_ID = "SC:AST_L1BT.001:7644"}
PROCESSING_OPTIONS = "Native Granule"
{MEDIA_TYPE = "CDROM"}
The above line specifies the CDROM media type, and the next line specifies the matching media format.
{MEDIA_FORMAT = "RockRidge"}
EST_COST = 777.88
END_GROUP = LINE_ITEM
GROUP = MONITOR
SESSION_ID = "cheyenne.hitc.com:24496:20020726:153027"
TX_CLIENT = ("1027711832", "939137")
END_GROUP = MONITOR
GROUP = VERSION
SENDER_VERSION = "imswww-3_4b_6"
PROTOCOL_VERSION = 3.2
IMS_STAFF = "1"
END_GROUP = VERSION
[PRIORITY = "HIGH"]
[USERSTRING = "TESTFOR"]
[NOTIFY = "zyu@eos.hitc.com"]
[DDISTNOTIFYTYPE = "MAIL"]
END_GROUP = PRODUCT_REQUEST
END

```

4.11.14.1.7 ODL Template File for DataPool-only granules

```

GROUP = PRODUCT_REQUEST
MESSAGE_ID = "B1027711830"
[REQUEST_ID = "37475:27364"]
DATA_CENTER_ID = "ECS-TEST"
[ECS_AUTHENTICATOR = "labuser"]
[METADATA_FLAG = "Y"]

```

The above line specifies the whether the Meta Data file associated with the granule in LINE_ITEM group is ordered or not.

```

GROUP = USER_AFFILIATION
CATEGORY = "USA"
TYPE = "GOVERNMENT"
END_GROUP = USER_AFFILIATION
{
GROUP = CONTACT_ADDRESS
TITLE = ""
FIRST_NAME = "Yu"
MIDDLE_INITIAL = ""
LAST_NAME = "Zhongfei"
ORGANIZATION = ""
ADDRESS = ("abcd")
CITY = "Landover"
STATE = "MD"
ZIP = ""
COUNTRY = "UNITED STATES"
}

```

```

        PHONE = "301-925-1042"
        FAX = ""
        EMAIL = "zyu@eos.hitc.com"
    END_GROUP = CONTACT_ADDRESS
}
{
GROUP = SHIPPING_ADDRESS
    TITLE = ""
    FIRST_NAME = "Yu"
    MIDDLE_INITIAL = ""
    LAST_NAME = "Zhongfei"
    ORGANIZATION = ""
    ADDRESS = ("abcd")
    CITY = "Landover"
    STATE = "MD"
    ZIP = ""
    COUNTRY = "UNITED STATES"
    PHONE = "301-925-1042"
    FAX = ""
    EMAIL = "zyu@eos.hitc.com"
    END_GROUP = SHIPPING_ADDRESS
}
{
GROUP = BILLING_ADDRESS
    TITLE = ""
    FIRST_NAME = "Yu"
    MIDDLE_INITIAL = ""
    LAST_NAME = "Zhongfei"
    ORGANIZATION = ""
    ADDRESS = ("abcd")
    CITY = "Landover"
    STATE = "MD"
    ZIP = ""
    COUNTRY = "UNITED STATES"
    PHONE = "301-925-1042"
    FAX = ""
    EMAIL = "zyu@eos.hitc.com"
    END_GROUP = BILLING_ADDRESS
}
GROUP = LINE_ITEM

```

```

    {DATASET_ID = "Non-ECS granule"}
    {PACKAGE_ID = "WB:AST_L1BT.001:7644"}

```

The above line specifies the DataPool-only granule, the granule type must be "WB"

```

        PROCESSING_OPTIONS = "Native Granule"
        {MEDIA_TYPE = "8MM"}
        {MEDIA_FORMAT = "TARFORMAT"}
        EST_COST = 777.88
    END_GROUP = LINE_ITEM
GROUP = LINE_ITEM
    {DATASET_ID = "JPL-GENERATED ASTER LEVEL 1B DATA - THERMAL IR
CHANNELS ONLY V001"}
    {PACKAGE_ID = "DP:AST_L1BT.001:7645"}
    PROCESSING_OPTIONS = "Native Granule"
    {MEDIA_TYPE = "8MM"}
    {MEDIA_FORMAT = "TARFORMAT"}

```

```

EST_COST = 777.88
END_GROUP = LINE_ITEM
GROUP = MONITOR
SESSION_ID = "cheyenne.hitc.com:24496:20020726:153027"
TX_CLIENT = ("1027711832", "939137")
END_GROUP = MONITOR
GROUP = VERSION
SENDER_VERSION = "imswww-3_4b_6"
PROTOCOL_VERSION = 3.2
IMS_STAFF = "1"
END_GROUP = VERSION
[PRIORITY = "HIGH"]
[USERSTRING = "TESTFOR"]
[NOTIFY = "zyu@eos.hitc.com"]
[DDISTNOTIFYTYPE = "MAIL"]
END_GROUP = PRODUCT_REQUEST
END

```

4.11.14.1.8 Examples

Example 1

```
EcSrOmCliDriverStart <MODE> /usr/ecs/<MODE>/CUSTOM/data/OMS/template/odl.rqst 1
```

This means one file called **odl.rqst.0** in directory /usr/ecs/<MODE>/CUSTOM/data/OMS/template/

Example 2

```
EcSrOmCliDriverStart <MODE> /usr/ecs/<MODE>/CUSTOM/data/OMS/template/odl.rqst 10
```

This means ten files must be named, **odl.rqst.0, odl.rqst.1, odl.rqst.2, odl, rqst.3, odl.rqst.4, odl.rqst.5, odl.rqst.6, odl.rqst.7, odl.rqst.8, odl.rqst.9** in directory /usr/ecs/<MODE>/CUSTOM/data/OMS/template/

Example 3

```
EcSrOmCliDriverStart <MODE> /usr/ecs/<MODE>/CUSTOM/data/OMS/template/odl.rqst 3 5
```

There are 3 requests to be submitted with 5 seconds submission interval.

Example 4

```
EcSrOmCliDriverStart <MODE> /usr/ecs/<MODE>/CUSTOM/data/OMS/template/odl.rqst 3 5
10 20
```

There are 3 requests to be submitted with 5 seconds submission interval and 5 db retries and 20 seconds db retry interval if database is inaccessible.

4.11.14.2 Order Manager Command Line Utility Main Screen

There is no main screen for this utility. This is a command line interface only.

4.11.14.3 Required Operating Environment

The Command Line Utility runs on the Sun Solaris platforms.

4.11.14.4 Databases

Table 4.11.14-3 lists the databases, stored procedures and tables used by the Command Line utility.

Table 4.11.14-3. Order Manager Data Bases

Database	Stored Procedure	Table(s)
EcOmDB_<MODE>	OmCreateRequest	OmRequest
		OmRequestOptions
	OmInsertGranule	OmGranule
	OmInsertSubSetInfo	OmSubSettingInfo
	OmInsertAction	OmActionQueue
mss_acct_db_<MODE>		EcAcRequest
		EcAcAddress

4.11.14.5 Special Constraints

Table 4.11.14-4 lists the COTS product dependencies for the Command Line Utility.

Table 4.11.14-4. Order Manager COTS Products Dependencies

Product Dependency	Protocols Used	Comments
OMS Database	SQL	Via SQL server machine
Sybase Open Client library	Sybase client/server communication	Requires proper baseline version of Open Client library

4.11.14.6 Outputs

The Command Line Utility does not produce any reports but sends messages to the operator via a log file.

4.11.14.7 Event and Error Messages

The Command Line Utility writes information useful to the operator to a log file. The file is stored in the /usr/ecs/<MODE>/CUSTOM/logs directory and is named EcOmSrCliDriverDebug.log and EcOmSrCliDriver.ALOG. The utility renames the debug log

and ALOG files to the name with current time stamp suffixes if they already exist and create new debug log and ALOG files.

There are two types of messages written to the utility's log file: errors and informative messages. Error messages include information about program internal/external faults, unplanned disconnects with the Sybase Server, general database errors, unable to open ODL files due permission or nonexistence, and configuration file problems. Informative messages include when the utility starts and stops and progress messages. All messages are date and time stamped.

If there are syntax errors in command-line invocation, a usage message is printed to the screen.

4.11.14.8 Reports

The Command Line Utility does not produce any reports.

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4.11.15 OMS Configuration Command Line Interface

The Synergy IV OMS Configuration Command Line Interface (hereafter referred to as the OMS Configuration CI) provides DAAC operators with the ability to configure specific parameters for the OMS Server and Database that are not configurable via the OMS GUI. The ability to configure these parameters and settings in this utility is restricted to limited-capability operators.

The OMS Configuration CI is a new capability for Synergy IV. Like most other ECS utilities, the OMS Configuration CI interacts directly with the OMS Database. However unlike many ECS command-line interfaces, the OMS Configuration CI uses an interactive menu system in addition to the ability to pass in command-line options.

Because of the nature and scope of the parameters and settings configurable with this utility, it should be rarely used. Most of the parameters and settings that would commonly and frequently be configured for the OMS as a system are done so via the OMS GUI.

Notes on Operator Capability Levels

In accordance with new Operator GUI security standards, the OMS GUI implements two levels of permissions such that only Full Capability operators have the ability to configure parameters and perform certain actions, while Limited Capability operators are limited to basic functionality as outlined in the OMS GUI section. The intention for the OMS Configuration CI is that it should be limited to operators of this “full capability” level. Certain parameters and capabilities were purposefully omitted from the OMS GUI to further restrict operator interaction due to the sensitivity of these parameters.

The Synergy IV OMS Configuration CI provides Full Capability operators with the ability to:

- Configure Synergy III mode exceptions. The operator can specify which media types, ESDT Collections, and FTP Push destinations should be processed using the Synergy III Processing Mode
- Set the Processing Mode of the OMS Server (i.e., toggle between Synergy III and Synergy IV)
- Configure Order Tracking Details for MSS and OMS

The Synergy V OMS Configuration CI provides Full Capability operators with the ability to:

- Set the processing mode for the restricted granules
- Set the processing mode for the billable granules
- Set which Production Module to use for a list of ESDT Collections.

4.11.15.1 Starting the OMS Configuration CI

Note: Although this utility is not protected in the same way as the OMS GUI, it was designed to be limited to Full Capability operators. Because it is a UNIX utility, it will employ standard UNIX security by protecting the execute permissions.

Script name: EcOmConfig.pl

Script path: /usr/ecs/<MODE>/CUSTOM/utilities/

Installation location: Installed onto the same machine as the OMS Server

Usage: EcOmConfig.pl [-s3dest <file> -s3esdt <file> -ot <file> -odl <file>] [-help]

No mode is required.

Table 4.11.15-1. Option Summary

Option	Description
-s3esdt <file>	The flat file containing the list of ESDT collections to be added or deleted for processing in Synergy III mode, depending on the selection made by the operator
-s3dest <file>	The flat file containing the list of FTP Push destinations to be added or deleted for processing in Synergy III mode, depending on the selection made by the operator
-ot <file>	The flat file containing edited order tracking configuration for update in the OMS database (see formatting instructions below)
-odl <file>	The flat file containing the list of ESDT collections to be added or deleted for processing by a certain Production Module, depending on the selection made by the operator
-help	Gives a brief overview of the input options that can be used with this utility.

Note: All the above options can be used concurrently.

4.11.15.2 OMS Configuration CI Operational Overview

Start the CI as specified above, passing in the options and any required flat files. The CI menu will interactively prompt the operator to take certain actions with those files (it will never automatically process files). Select the type of configuration desired from the menu by typing the corresponding number at the prompt.

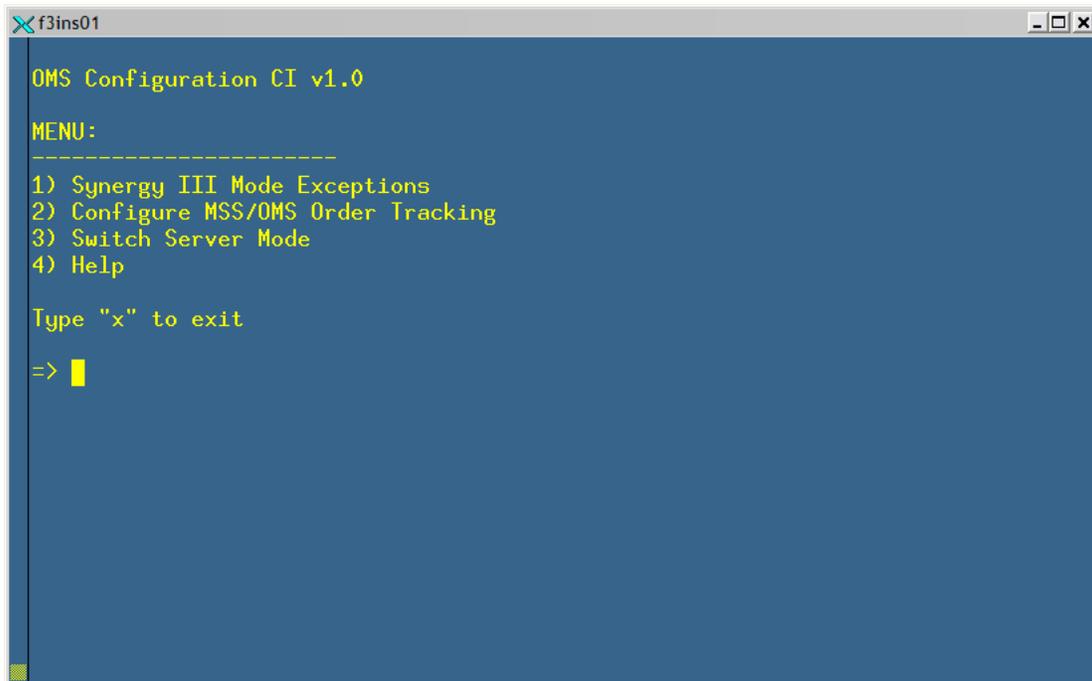


Figure 4.11.15-1. Synergy III Mode Exceptions Menu Screen

When this item is selected, a submenu appears with the following selections.

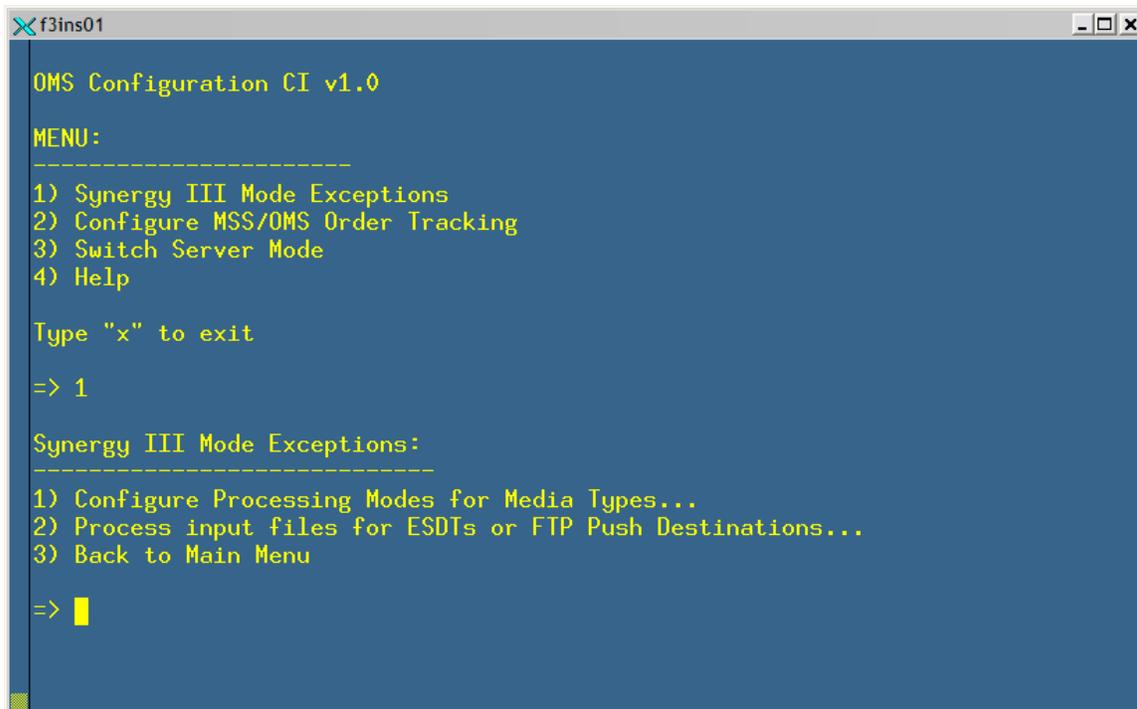
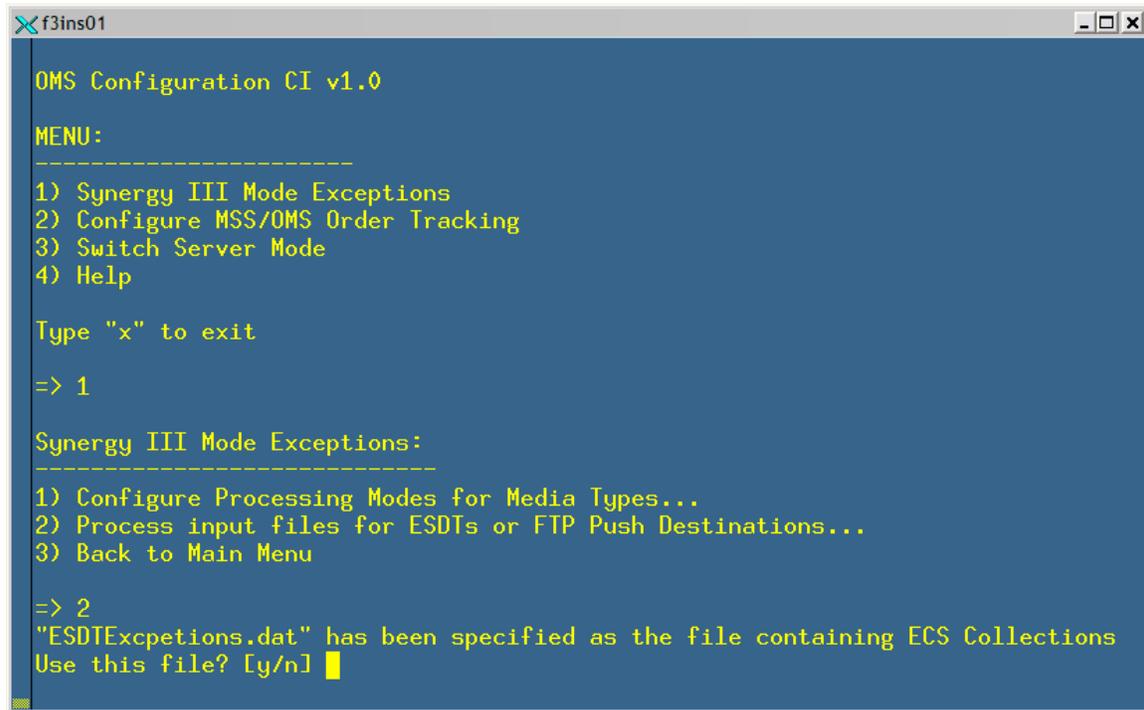


Figure 4.11.15-2. Synergy III Mode Exceptions Selection Screen (1 of 3)

To process any of the input files specified for Synergy III Exceptions (e.g., -s3esdt), type item 2. The utility will determine which file was specified for which purpose and ask for confirmation.



```
f3ins01
OMS Configuration CI v1.0
MENU:
-----
1) Synergy III Mode Exceptions
2) Configure MSS/OMS Order Tracking
3) Switch Server Mode
4) Help

Type "x" to exit
=> 1

Synergy III Mode Exceptions:
-----
1) Configure Processing Modes for Media Types...
2) Process input files for ESDTs or FTP Push Destinations...
3) Back to Main Menu

=> 2
"ESDTExcpetions.dat" has been specified as the file containing ECS Collections
Use this file? [y/n] █
```

Figure 4.11.15-2. Synergy III Mode Exceptions Selection Screen (2 of 3)

Type 'y' to confirm. You will then need to select an action to take (add or delete the specified items in the list contained in the input file).

```
f3ins01
-----
1) Synergy III Mode Exceptions
2) Configure MSS/OMS Order Tracking
3) Switch Server Mode
4) Help

Type "x" to exit

=> 1

Synergy III Mode Exceptions:
-----
1) Configure Processing Modes for Media Types...
2) Process input files for ESDTs or FTP Push Destinations...
3) Back to Main Menu

=> 2
"ESDTExcpetions.dat" has been specified as the file containing ECS Collections
Use this file? [y/n] y
Select an action to take:
1) ADD the ESDTs specified in the file
2) DELETE the ESDTs specified in the file
3) Back to main menu
=> █
```

Figure 4.11.15-2. Synergy III Mode Exceptions Selection Screen (3 of 3)

If you want the ESDTs specified in the file to be processed in Synergy III mode, select ADD (item 1), otherwise if you want those ESDTs *not* to be processed in Synergy III mode (i.e., they will be processed in Synergy IV mode), selected DELETE (item 2).

In this example, we chose to ADD the ESDTs.

```
f3ins01
1) Synergy III Mode Exceptions
2) Configure MSS/OMS Order Tracking
3) Switch Server Mode
4) Help

Type "x" to exit

=> 1

Synergy III Mode Exceptions:
-----
1) Configure Processing Modes for Media Types...
2) Process input files for ESDTs or FTP Push Destinations...
3) Back to Main Menu

=> 2
"ESDTExcpetions.dat" has been specified as the file containing ECS Collections
Use this file? [y/n] y
Select an action to take:
1) ADD the ESDTs specified in the file
2) DELETE the ESDTs specified in the file
3) Back to main menu
=> 1
Press <ENTER> to continue... █
```

Figure 4.11.15-3. Synergy III Mode Exceptions Selection Screen: Adding ESDTs

This same process is applied to FTP Push destinations– the operator will be prompted to ADD or DELETE in the same way.

File Formats

The flat files containing the media, destination, or ESDT information should consist of one item per line.

Examples:

ESDT file: *White space is ignored, so multiple lines can separate groups of collection.*

```
MOD11_L2.001
MOD11_L2.002
GDAS_OZF.001
GDAS_OZF.002
.
.
```

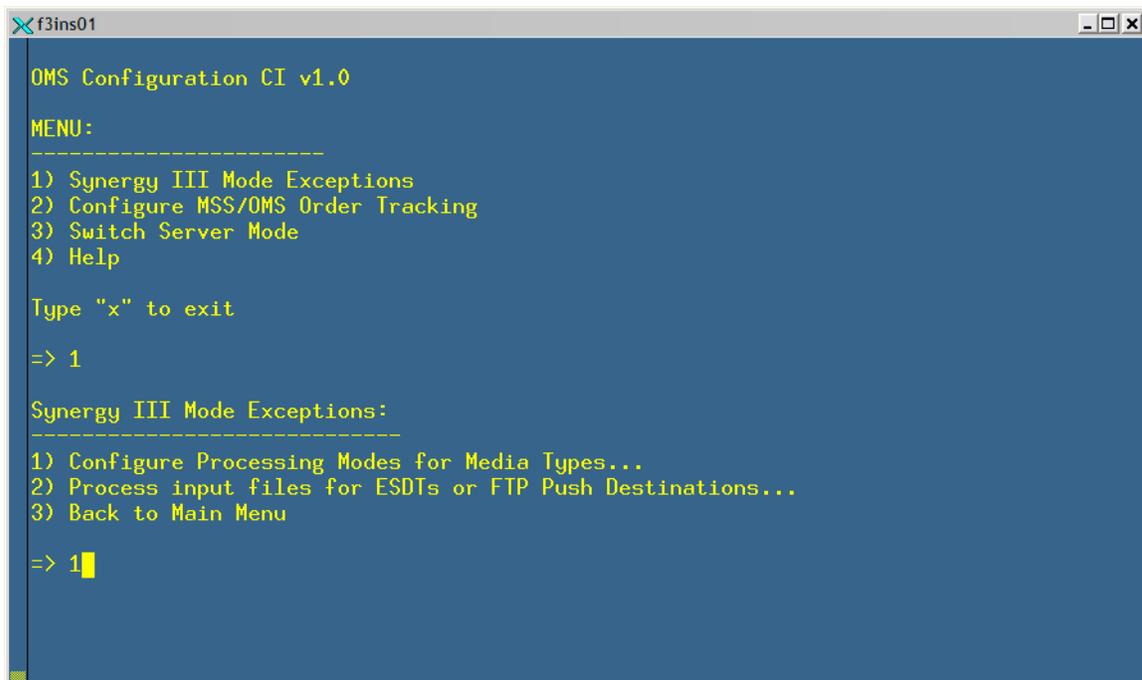
FTP Push Destinations file:

Fordham University
Yale University
Goddard DAAC Site 1
:
.

Synergy III Mode Exceptions – Media Types

Changing the processing mode for a media is different than for FTP Push destinations or ESDTs. In this case the operator does not provide an input file. Instead it is changed through an interactive menu system.

From the main menu, select “Synergy III Mode Exceptions” and then “Configure Processing Modes for Media Types...” from the subsequent menu:



```
f3ins01
OMS Configuration CI v1.0
MENU:
-----
1) Synergy III Mode Exceptions
2) Configure MSS/OMS Order Tracking
3) Switch Server Mode
4) Help
Type "x" to exit
=> 1
Synergy III Mode Exceptions:
-----
1) Configure Processing Modes for Media Types...
2) Process input files for ESDTs or FTP Push Destinations...
3) Back to Main Menu
=> 1
```

**Figure 4.11.15-4. Synergy III Mode Exceptions Selection Screen:
Selecting Media Type.**

The Media Type configuration screen will then display all available media types and their current processing modes. You can then select the media type you wish to configure.

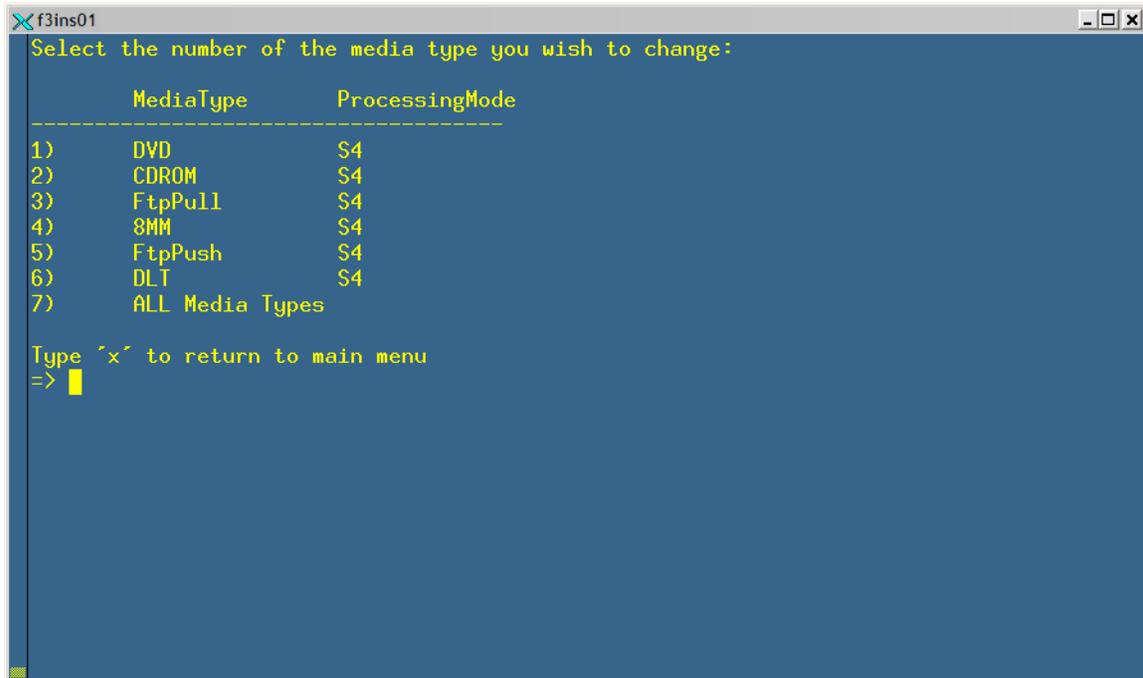


Figure 4.11.15-5. Processing Modes for Media Type Menu Screen

If for example we want to change “DVD” to the S3 processing mode, we would select the number for that media type, 1. We then get a prompt to choose its new processing mode.

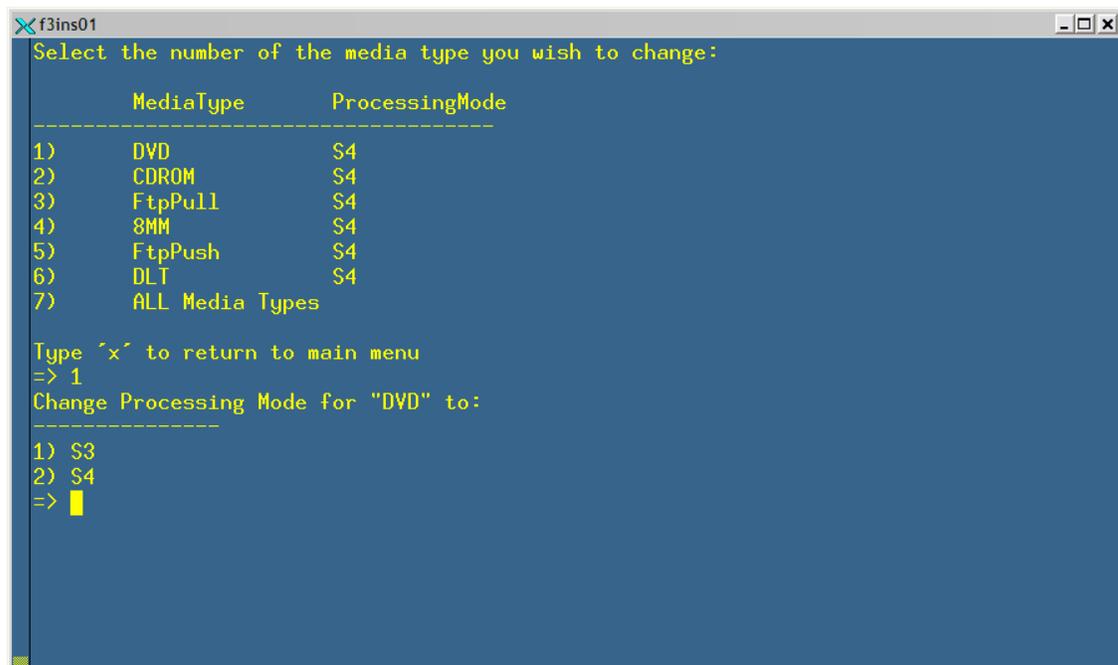
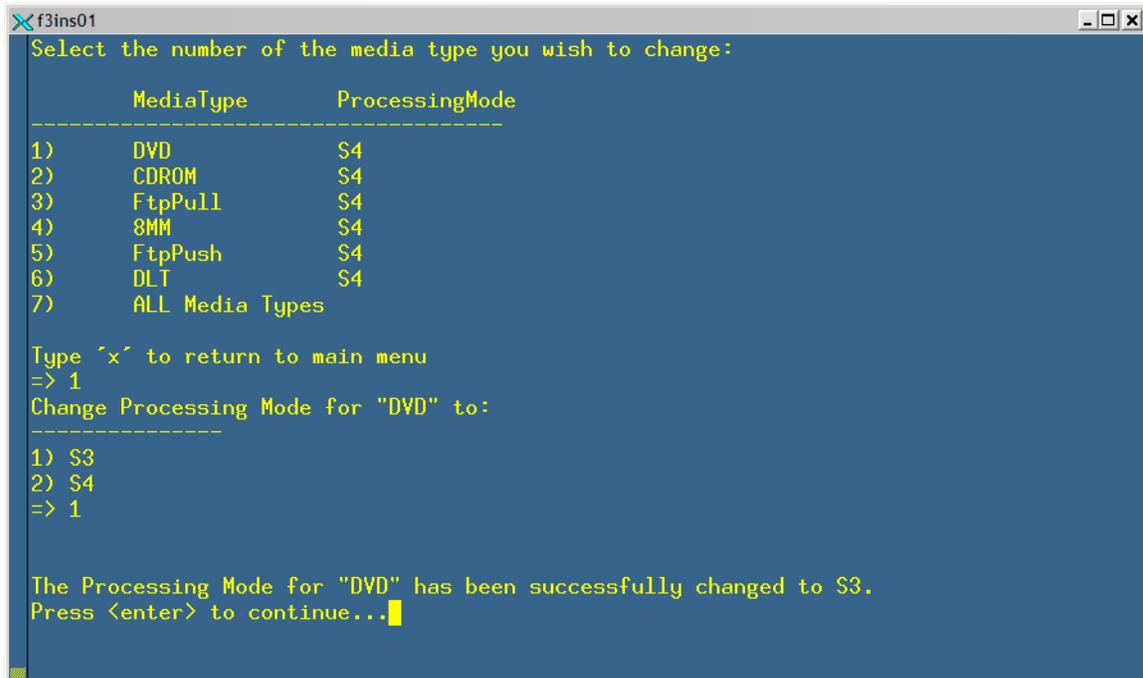


Figure 4.11.15-6. Change Processing Mode for the Media Type (1 of 2)

After selecting S3 or S4, a success message is displayed (otherwise a Sybase error will be displayed).



```
f3ins01
Select the number of the media type you wish to change:

MediaType      ProcessingMode
-----
1) DVD          S4
2) CDROM        S4
3) FtpPull      S4
4) 8MM          S4
5) FtpPush      S4
6) DLT          S4
7) ALL Media Types

Type ^x^ to return to main menu
=> 1
Change Processing Mode for "DVD" to:
-----
1) S3
2) S4
=> 1

The Processing Mode for "DVD" has been successfully changed to S3.
Press <enter> to continue...
```

Figure 4.11.15-6. Change Processing Mode for the Media Type (2 of 2)

MSS/OMS Order Tracking Configuration

This feature allows the operator to configure how long order-tracking information is kept in the database. This can be configured by media type and order source.

When this item is selected from the main menu, the following submenu appears:

```
f3ins01
OMS Configuration CI v1.0
MENU:
-----
1) Synergy III Mode Exceptions
2) Configure MSS/OMS Order Tracking
3) Switch Server Mode
4) Help
Type "x" to exit
=> 2
Configure Order Tracking Data
-----
1) Export current configuration to local file...
2) Import new configuration to database...
3) View current configuration
4) Back to main menu
=> █
```

Figure 4.11.15-7. Configure Order Tracking Data Menu Screen (1 of 3)

The process here is to export the current configuration to a local file, edit that file, and import it back into the database.

To **export**, select item 1 (“Export current configuration to local file...”). The utility will create a unique file in the current directory.

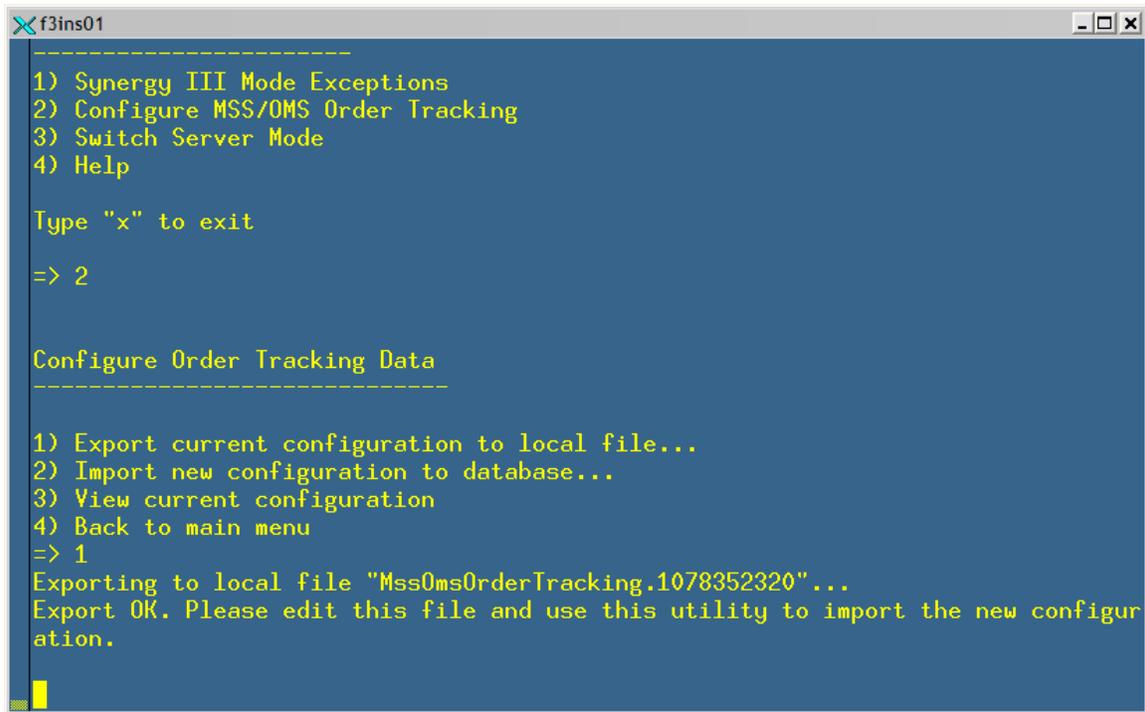


Figure 4.11.15-7. Configure Order Tracking Data Menu Screen (2 of 3)

The saved file contains the configuration for all media types and *all* order sources. It will be in the following format

D	FtpPull	0
S	FtpPull	0
V	FtpPull	0
M	FtpPull	0
D	FtpPush	0
S	FtpPush	0
V	FtpPush	0
M	FtpPush	0
D	CDROM	0
S	CDROM	0
V	CDROM	0
M	CDROM	0
D	DLT	0
S	DLT	0
V	DLT	0

M	DLT	0
D	DVD	0
S	DVD	0
V	DVD	0
M	DVD	0
D	8MM	0
S	8MM	0
V	8MM	0
M	8MM	3
D	scp	0
S	scp	0
V	scp	1.5
M	scp	0

The first item is the order source (D, S, V, or M), followed by the media type, followed by the retention time period in DAYS. See Table 4.11.15-2 below for the order source mappings.

Table 4.11.15-2. Order Source Mappings

Order Source Abbreviation	Order Source
D	Data Pool
S	Spatial Subscription Server
V	V0-Gateway
M	SIPS Machine-to-Machine Gateway

The file can be edited for any changes and then exported to the database. The file will be parsed out and the changes will be submitted to the database by “importing” the file:

To **import** the file, run the utility again and pass in the edited file using the **-ot** option (see the beginning of this section). Select “Configure MSS/OMS Order Tracking” from the main menu and “Export new configuration to database...” from the subsequent menu.

```
f3ins01
MENU:
-----
1) Synergy III Mode Exceptions
2) Configure MSS/OMS Order Tracking
3) Switch Server Mode
4) Help

Type "x" to exit
=> 2

Configure Order Tracking Data
-----

1) Export current configuration to local file...
2) Import new configuration to database...
3) View current configuration
4) Back to main menu
=> 2
You are about to import an edited configuration file. Please make sure the fields
are properly edited. These changes will be submitted to the OMS database.

"MssOmsOrderTracking.1078352320" was specifed as the export file. Do you want to use th
is one? [y/n] █
```

Figure 4.11.15-7. Configure Order Tracking Data Menu Screen (3 of 3)

The file will be checked for correct syntax and the changes will then be submitted.

Switch Server Mode

Select “Switch Server Mode” from the main menu. This option allows the operator to switch the OMS Server processing between S3 (Synergy III) and S4 (Synergy IV). This feature will work like a toggle. If the current mode is S3, the operator will only be given the option to switch to s4 and vice versa. See the following screenshot:

```
f3ins01
OMS Configuration CI v1.0
MENU:
-----
1) Synergy III Mode Exceptions
2) Configure MSS/OMS Order Tracking
3) Switch Server Mode
4) Help

Type "x" to exit

=> 3
Getting current processing mode...
The OMS Server is: UP
CURRENT PROCESSING MODE = S4
Please shut down the OMS Server before switching the server mode.
You may then select this option again from the main menu.
(No need to exit this program)

Press <ENTER> to continue...
█
```

Figure 4.11.15-8. Switch Server Mode Selection Screen

This function also displays the current status of the OMS Server (if it is up or down).

Note: The server mode can only be changed if the OMS Server is **down**. Shut down the server, run this utility to change the server mode, and restart the server again.

Configure Billable Granule Processing Mode

Select “Configure Billable Granule Processing Mode” from the main menu. This option allows the operator to switch the OMS Server processing mode for billable granule(s) between S3 (Synergy III) and S4 (Synergy IV). This feature will work like a toggle. If the current mode is S3, the operator will only be given the option to switch to S4 and vice versa. See the following screenshot:

```
xterm
MENU:
-----
1) Synergy III Mode Exceptions
2) Configure MSS/OMS Order Tracking
3) Switch Server Mode
4) Configure Billable Granule Processing Mode
5) Configure Restricted Granule Processing Mode
6) Help

Type "x" to exit

=> 4
Getting current billable granule processing mode ....
CURRENT BILLABLE GRANULE PROCESSING MODE = S3

-----
1) Switch Billable Granule Processing Mode to S4
2) Back to main menu
3) Exit
=>
1
Changing billable granule processing mode to "S4"...
Billable granule processing mode changed. Press <ENTER> to continue.[]
```

Figure 4.11.15-9. Configure Billable Granule Processing Mode

Configure Restricted Granule Processing Mode

Select “Configure Restricted Granule Processing Mode” from the main menu. This option allows the operator to switch the OMS Server processing mode for restricted granule(s) between S3 (Synergy III) and S4 (Synergy IV). This feature will work like a toggle. If the current mode is S3, the operator will only be given the option to switch to S4 and vice versa. See the following screenshot:

```
xterm
MENU:
-----
1) Synergy III Mode Exceptions
2) Configure MSS/OMS Order Tracking
3) Switch Server Mode
4) Configure Billable Granule Processing Mode
5) Configure Restricted Granule Processing Mode
6) Help

Type "x" to exit
=> 5
Getting current Restricted granule processing mode ....

-----
1) Switch Restricted Granule Processing Mode to S4
2) Back to main menu
3) Exit
=>
1
Changing restricted granule processing mode to "S4"...
Restricted granule processing mode changed. Press <ENTER> to continue.[]
```

Figure 4.11.15-10. Configure Restricted Granule Processing Mode

Configure Production Modules

To configure Production Modules for use with certain ESDT Collections, start the Configuration CI with the `-odl <file>` parameter, where `<file>` is a text file of ESDT Collections with the same format as described in the File Formats section above. Then, choose “Configure Production Modules” from the main menu, and the following submenu appears:

```
xterm
OMS Configuration CI v1.0
MENU:
-----
1) Synergy III Mode Exceptions
2) Configure MSS/OMS Order Tracking
3) Switch Server Mode
4) Configure Billable Granule Processing Mode
5) Configure Restricted Granule Processing Mode
6) Configure Production Modules
7) Help

Type "x" to exit

=> 6

Select a Production Module:
-----
1) MODISOUT
2) ASTEROUT
3) GENERICOUT
4) GENERICOUT2
=> █
```

Figure 4.11.15-11. Configure Production Module (1 of 4)

Select the Production Module from which you want to ADD or DELETE the list of ESDT Collections specified at script startup. The following submenu appears:

```
xterm
5) Configure Restricted Granule Processing Mode
6) Configure Production Modules
7) Help

Type "x" to exit

=> 6

Select a Production Module:
-----
1) MODISOUT
2) ASTEROUT
3) GENERICOUT
4) GENERICOUT2
=> 1

Select an action:
-----
NOTE: File "odl.txt" will be used for the following actions:
1) ADD ESDTs in the file to "MODISOUT"
2) DELETE ESDTs in the file from "MODISOUT"
3) Cancel
=> █
```

Figure 4.11.15-12. Configure Production Module (2 of 4)

Select to either ADD or DELETE the ESDT Collections found in the input file to the selected Production Module. One of the following should appear:

```
xterm
1) MODISOUT
2) ASTEROUT
3) GENERICOUT
4) GENERICOUT2
=> 1

Select an action:
-----
NOTE: File "odl.txt" will be used for the following actions:

1) ADD ESDTs in the file to "MODISOUT"
2) DELETE ESDTs in the file from "MODISOUT"
3) Cancel
=> 1
Processing...
AST_L1B. 001
ESDTs successfully processed.
Press <enter> for Main Menu.
```

Figure 4.11.15-13. Configure Production Module (3 of 4)

```
xterm
1) MODISOUT
2) ASTEROUT
3) GENERICOUT
4) GENERICOUT2
=> 1

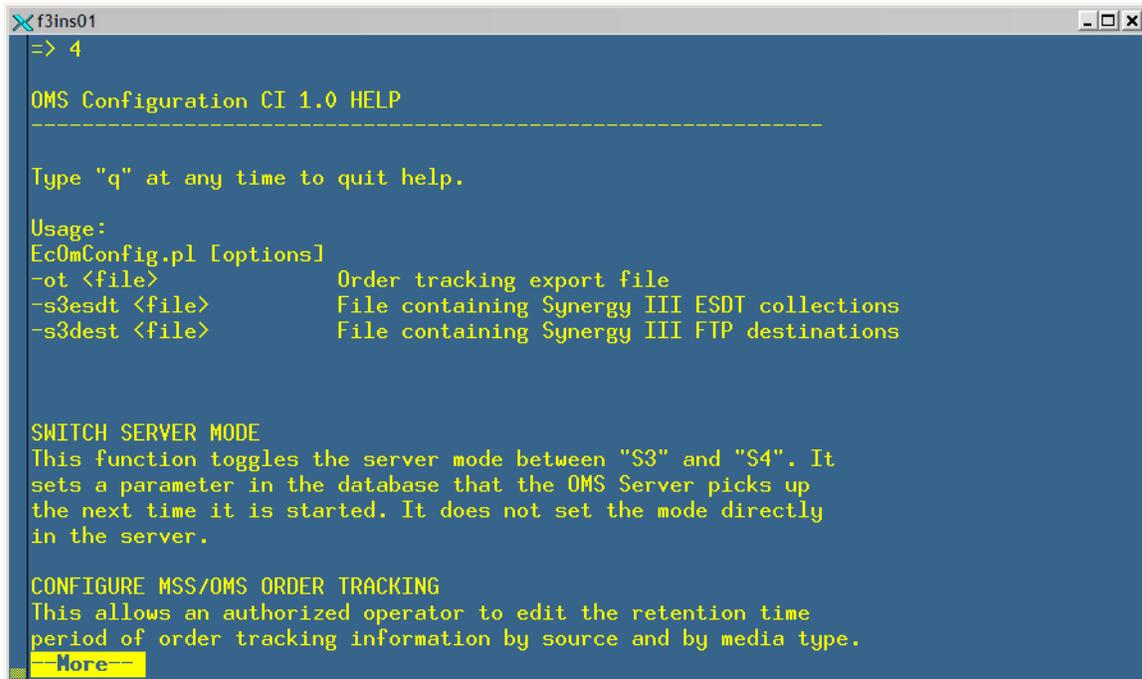
Select an action:
-----
NOTE: File "odl.txt" will be used for the following actions:

1) ADD ESDTs in the file to "MODISOUT"
2) DELETE ESDTs in the file from "MODISOUT"
3) Cancel
=> 2
Processing...
AST_L1B. 001
ESDTs successfully processed.
Press <enter> for Main Menu.
```

Figure 4.11.15-14. Configure Production Module (4 of 4)

OMS Configuration CI Help

Select “Help” from the main menu for a complete synopsis of the options and all available functions of the CI. The **-help** option also displays a brief overview of the input options. Below is part of the help text.



```
f3ins01
=> 4

OMS Configuration CI 1.0 HELP
-----

Type "q" at any time to quit help.

Usage:
Ec0mConfig.pl [options]
-ot <file>          Order tracking export file
-s3esdt <file>     File containing Synergy III ESDT collections
-s3dest <file>     File containing Synergy III FTP destinations

SWITCH SERVER MODE
This function toggles the server mode between "S3" and "S4". It
sets a parameter in the database that the OMS Server picks up
the next time it is started. It does not set the mode directly
in the server.

CONFIGURE MSS/OMS ORDER TRACKING
This allows an authorized operator to edit the retention time
period of order tracking information by source and by media type.

More
```

Figure 4.11.15-15. Help Screen

4.11.15.3 Required Operating Environment

The following environment is required for the OMS Configuration CI to work properly.

The O/S requirements are Solaris 2.5.1 or better, or SGI IRIX6.5 or better.

4.11.15.4 Interfaces and Data types

The OMS Configuration CI exchanges data between the Application (interaction w/ operator) and Sybase, using Perl DBI Modules.

4.11.15.5 Databases

The OMS Configuration CI accesses the OMS and MSS Accountability databases.

4.11.15.6 Special Constraints

There are no special constraints to running the OMS Configuration CI.

4.11.15.7 Outputs

The Configuration CI is an interactive system, so messages and prompts are displayed to the operator on the screen. Error messages are displayed to the screen as well as printed to the log.

4.11.15.8 Events and Messages

The Configuration CI writes status and error messages to the EcOmConfig.log file in the directory /usr/ecs/<MODE>/CUSTOM/logs.

4.11.15.9 Reports

The Configuration CI does not generate reports.

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4.11.16 Bulk URL Utility

The Bulk URL utility (EcBmBulkURL) exports to ECHO the metadata content of products in the Data Pool, including their ftp URLs, based on an assumption that the product is an ECS data type and that the information about the product in the ECS Science Data Server has already been exported to ECHO by the Bulk Metadata Generation Tool (BMGT).

4.11.16.1 Using the BulkURL Utility

The Bulk URL Utility is executed via a start script (EcBmBulkURLStart, located in the /usr/ecs/<mode>/CUSTOM/utilities directory), which takes two command line parameters. Table 4.11.16-1 provides a description of these parameters.

Table 4.11.16-1. Command Line Parameters

Parameter Name	Required	Description
<mode>	Yes	The operational mode where the utility will be run (e.g., OPS, TS1, TS2)
<"Insert" "Delete">	Yes	Indicates whether the Bulk URL utility should report Data Pool inserts or Data Pool deletions to ECHO

Examples of command lines for Bulk URL execution are:

EcBmBulkURLStart OPS Insert – runs the Bulk URL utility in OPS mode, with the Insert option

EcBmBulkURLStart TS1 Delete – runs the Bulk URL utility in TS1 mode, with the Delete option

The “Insert” and “Delete” command line options are described below.

4.11.16.1.1 Insert

With the Insert option, the BulkURL utility is run on a daily cron job or from the command line, and should be run after the daily BMGT run has completed (this maximizes the probability that ECHO has already received information about the granules from the BMGT and has added the granules to its inventory).

With the Insert option, the BulkURL utility will export an xml representation of the ftp URL information for science files, metadata files, and browse files associated with Data Pool granules, which meet all of the following conditions:

a) The granule is in a collection which is eligible for export (from Data Pool) to ECHO.

This is determined by whether the bulkExportedFlag = “Y” for that collection in the DICollections table in the Data Pool database. (NOTE: The BMGT determines which collections are eligible for export (from SDSRV) using the EcBmBMGTGroup.xml file in the /usr/ecs/<mode>/CUSTOM/cfg directory on x0acs0n, but the BulkURL utility uses the bulkExportedFlag in DICollections instead.) DAAC operations staff should set the

bulkExportedFlag for each collection that is also exported by the BMGT, according to DAAC export policy. The bulkExportedFlag should then only be changed if the export policy changes.

b) The granule was inserted into the Data Pool during the time period specified by the run. This time period is either:

- 1) a time period ending when the BulkURL utility begins its run, if the EcBmBulkURLConfigParams.xml file has doPreviousFlag = true; the time period can be in days (duration = day and count = <number of days>), or hours (duration = hour, and count = <number of hours>); or
- 2) the time period between a specified start and end date/time, if doPreviousFlag = false and <start Date> and <end Date> are specified in the EcBmBulkURLConfigParams.xml file.

c) The granule is not an “order only” granule, i.e., it was not placed in the Data Pool for the sole purpose of fulfilling a specific OMS order. If the granule is an “order only” granule, the isOrderOnly flag in the DIGranules table will have been turned on when the granule was inserted in the Data Pool. (This constraint was introduced with Release 7.0, when the Data Pool began to be used as a staging area for OMS orders. The intent of the BulkURL utility is only to export Data Pool URLs for granules placed in the Data Pool by subscription or batch insert – these granules are intended to be available to the general Data Pool user community).

4.11.16.1.2 Delete

With the Delete option, the BulkURL utility will export an XML representation of a list of granuleURs for Data Pool granules, which meet all of the following conditions:

1) The granule is in a collection which is eligible for export (from Data Pool) to ECHO.

This is determined by whether the bulkExportedFlag = “Y” for that collection in the DICollections table in the Data Pool database. (See above)

2) The granule will be deleted from the Data Pool in this (possibly two-part) run of the Cleanup utility (i.e., the granule is represented in the DIFilesToBeDeleted table in the Data Pool database)

3) The granule is not “order only”

The BulkURL utility is run with the “Delete” option as an integral part of the Data Pool Cleanup utility. When the Cleanup utility is run, the operator chooses whether to run the cleanup as a one pass (setting the echo mode command line parameter to “deleteall”) or two-pass (setting the echo mode command line parameter to “predelete” on the first pass, and setting the echomode command line parameter to “finishdelete” on the second pass) process.

In the one-pass process (echomode = “deleteall”), Cleanup will delete expired granules from the Data Pool and will invoke the Bulk URL utility to notify ECHO of the deletions. If the one pass Cleanup process is used, it will be possible for a granule to be deleted from the Data Pool before ECHO removes the granule from its inventory, thus making it possible for an ECHO user to receive an error when attempting to access an already-deleted granule.

In the two-pass process, during the first pass (echomode = “predelete”), Cleanup will determine which granules are expired, will invoke the Bulk URL utility to notify ECHO of their pending deletion, but will not actually delete the granules. After a time lag during which ECHO removes the to-be-deleted granules from its inventory, Cleanup is run in the second pass (echomode =

“finishdelete”) and all of the to-be-deleted granules are actually removed from the Data Pool. The Bulk URL utility is not invoked during the second pass of the Cleanup utility.

Use of the Cleanup echo mode command line parameter is described in more detail in the Data Pool Cleanup Utility section of this 609 document (4.12.9).

4.11.16.2 Bulk URL Utility Configuration File

The Bulk URL utility uses an xml configuration file, EcBmBulkURLConfigParams.xml, located in the /usr/ecs/<mode>/CUSTOM/cfg directory on the x0dps01 host. The configuration parameters are stored in xml format (<parameter name>parameter value</parameter name>), with each parameter/value pair as a separate line entry in the file. Table 4.11.16-2 describes the configuration parameters that can be set by the DAAC operations staff.

Table 4.11.16-2. Configuration Parameters (1 of 2)

Parameter Name	Value Description
debug, level	Debug level for debug log
log, level	Logging level of the application log
jdbc, url	“jdbc:sybase:Tds:<sybase server host name>:<sybase server port>/<sybase server name>”, e.g., jdbc:sybase:Tds:p0acg05:3005/p0acg05_svr
insert, previousRange, doPreviousFlag	“true” if the time period for which the Bulk URL utility reports Data Pool inserts or deletions to ECHO is the time period ending when the run begins, and of duration indicated by the <duration> and <count> parameters; “false” if the time period of the run is specified using the <startDate> and <endDate> parameters
insert, previousRange, duration	“day” if the time period of the run is measured in days; “hour” if the time period of the run is measured in hours; only valid if doPreviousFlag = true.
insert, previousRange, count	Integer indicating how many days or hours (depending on value of <duration> parameter) will be in the time period of the run; only valid if doPreviousFlag = true
insert, startDate	The start date of the time period of the run; only valid if doPreviousFlag = false
insert, endDate	The end date of the time period of the run; only valid if doPreviousFlag = false
owsdeletes, isOwsDeploymentSite	“true” if the site is enabled for OWS; “false” otherwise
outputDirectory	Directory where output file from Bulk URL utility will be placed for default ftppull access; of the form /datapool/<mode>/user/<filesystem>/URLExport
socksProxyHost	Proxy host (firewall ip address) used by FTP utils to ftp the generated xml files.
socksProxyPort	Proxy port (firewall port) used by FTP utils.
ftpHost	Full path name of the host where the Data Pool runs; <ftpHost> will be used to construct the Data Pool urls in the Bulk URL utility’s output file.

Table 4.11.16-2. Configuration Parameters (2 of 2)

Parameter Name	Value Description
ftpDestHost	Full path host name of the ECHO destination host where the Bulk URL output file will be pushed
ftpPort	ftp port number at ECHO (normally 21)
ftpDestination	Full path directory and file name on the ftpDestHost where the Bulk URL output file will be pushed
ftpUser	"anonymous:" (this is the account to be used for ftp access at ECHO)
ftpPassword	Anonymous ftp password for FTP access at ECHO(this should be an email address)
ftpWait	Number of seconds to wait before retrying a failed ftp
ftpRetry	Number of times to try to ftppush the Bulk URL output file to the ftpDestination on the ftpDestHost. If, after this number of tries, the ftppush is still unsuccessful, an email will be sent to the <toEmail> email address indicating that the file could not be pushed, but is available for pull at <output Directory>
fromEmailAddress	The DAAC sender address for email notifications of unsuccessful ftppush of Bulk URL output file.
fromEmailHost	Email host of the sender.
toEmail	Address to which email should be sent indicating that ftppush of the Bulk URL output file has been unsuccessful. Note that <toEmail> may contain several email addresses separated by commas.
dataCenterID	Will be used as prefix to output file names to indicate to ECHO the source of the output file; e.g. "PVC", "EDC", etc.
dtdLocation	Web location address where dtd files are installed
delFileName	"true" or "false"; if <delFileName> is set to true, the output files generated by the Bulk URL utility are deleted from the <outputDirectory> after a successful ftp push to the <ftpDestination> directory.

4.11.16.3 Required Operating Environment

The Bulk URL Utility runs on a SUN platform.

4.11.16.4 Interfaces and Data Types

Table 4.11.16-3 lists the supporting products that this tool depends upon in order to function properly.

Table 4.11.16-3. Interface Protocols

Product Dependency	Protocols Used	Comments
Data Pool database	SQL	Via SQL server machines

4.11.16.5 Special Constraints

The Bulk URL utility runs only if the Data Pool database server is running and if the Data Pool database is available. It also assumes the stored procedures are present.

4.11.16.6 Outputs

The BulkURL utility exports Data Pool information to ECHO in a file called <DAAC>InsURL.<datetimestamp>.xml (with the Insert option) or <DAAC>DelURL.<datetimestamp>.xml (with the Delete option). These output files are pushed to the ftp destination configured in EcBmBulkURLConfigParams.xml (<ftpDestHost>, <ftpDestination>). If, after a configurable number of tries (<ftpRetry>), the file cannot be pushed to this location, an email will be sent to a configurable email address (<toEmail>; note that <toEmail> may contain several email addresses separated by commas) indicating that the file could not be pushed, but is available for pull at /datapool/<mode>/user/<filesystem>/URLExport.

If <delFileName> is set to true in EcBmBulkURLConfigParams.xml, the xml files generated by the BulkURL utility are deleted from the /datapool/<mode>/user/<filesystem>/URLExport directory after a successful ftp push to the <ftpDestination> directory.

A sample Bulk URL output file with the **insert** option is:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE ProviderAccountService SYSTEM
"http://http://f3ins01.east.hitc.com:24211/BMGTUpdateMetadata.dtd">

<ProviderAccountService>
  <UpdateMetadata>
    <Granule>
      <Target>
        <ID>SC:MOD13A2.004:13576</ID>
        <ProviderLastUpdateDateTime>2005-04-05
08:56:53.6</ProviderLastUpdateDateTime>
        <SaveDateTimeFlag><DONTSAVE/></SaveDateTimeFlag>
      </Target>

      <Add>
        <QualifiedTag>OnlineAccessURLs/OnlineAccessURL/URL</QualifiedTag>
        <MetadataValue>ftp://f0dps01/FS1//MOLT/MOD13A2.004/2004.01.01/lab
test_9846</MetadataValue>
      </Add>

      <Add>
        <QualifiedTag>OnlineAccessURLs/OnlineAccessURL[URL="ftp://f0dps01
/FS1//MOLT/MOD13A2.004/2004.01.01/labtest_9846"]/MimeType</Qualif
iedTag>
        <MetadataValue>application/x-hdfeos</MetadataValue>
      </Add>

      <Add>
        <QualifiedTag>GranuleOnlineResources/OnlineResource/OnlineResourc
eURL</QualifiedTag>
```

```

<MetadataValue>ftp://f0dps01/FS1//MOLT/MOD13A2.004/2004.01.01/lab
test_9846.xml</MetadataValue>
  </Add>

  <Add>
<QualifiedTag>GranuleOnlineResources/OnlineResource[OnlineResourc
eURL="ftp://f0dps01/FS1//MOLT/MOD13A2.004/2004.01.01/labtest_9846
.xml "]/OnlineResourceType</QualifiedTag>
  <MetadataValue>METADATA</MetadataValue>
  </Add>

  <Add>
<QualifiedTag>GranuleOnlineResources/OnlineResource[OnlineResourc
eURL="ftp://f0dps01/FS1//MOLT/MOD13A2.004/2004.01.01/labtest_9846
.xml "]/OnlineResourceMimeType</QualifiedTag>
<MetadataValue>text/xml</MetadataValue>
  </Add>
  </Granule>
</UpdateMetadata>

```

</ProviderAccountService>

A sample Bulk URL output file with the **delete** option is:

```

<ProviderAccountService>
<UpdateMetadata>
  <Granule>
    <Target>
      <ID>SC: MOD11A1.004: 127680</ID>
      <ProviderLastUpdateDateTime>2005/04/11
      11:37:51</ProviderLastUpdateDateTime>
      <SaveDateTimeFlag>
        <DONTSAVE/>
      </SaveDateTimeFlag>
    </Target>
    <Delete>
      <QualifiedTag>OnlineAccessURLs</QualifiedTag>
    </Delete>
  </Granule>
</UpdateMetadata>
</ProviderAccountService>

```

4.11.16.7 Event and Error Messages

Usage errors will be displayed to the screen. Processing error messages are written to the log files.

4.11.16.8 Reports

None

4.11.16.9 Logs

The utility produces two log files in the /usr/ecs/<mode>/CUSTOM/logs directory:

- 1) An application log file called EcBmBulkURL.ALOG.
- 2) A debug log called EcBmBulkURLDebug.log.

If these log files already exist, the files are time stamped and saved in the logs directory, and new logs are created. If there are no existing logs files by these names, new log files with these names will automatically be created when the Bulk URL Utility is invoked.

4.11.16.10 Recovery

The Bulk URL utility does not perform automatic recovery operations. If the log file indicates that the utility failed to run to successful completion, the utility should be reinvoked.

(NOTE: If the Data Pool Cleanup utility fails to invoke the Bulk URL utility, the Cleanup utility will create a recovery file. Whenever the Bulk URL utility is invoked with the “Delete” option, it will always process Cleanup’s recovery file first, if it exists. The path and filename of the Cleanup recovery file is in the EcBmBulkURLConfigParams.xml file; see the delRecoveryFile parameter (not configurable via ECSAssist).)

4.11.16.11 Sybase Error Handling

If a Sybase error occurs, the actual Sybase error string will be displayed on the screen and in the log. Possible Sybase errors are that the database server is unavailable, that the connection to the database was dropped, or that there was an error executing the stored procedure. In the event of a Sybase-sourced error, the utility will immediately stop running.

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4.11.17 OmPdCleanup GUI

This Tool Command Language (Tcl) GUI cleans up or archives files that are no longer needed for reference, reuse, or troubleshooting. These include:

- EcOmPdModule debug logs
- order summary files
- tape label files
- QC reports and logs.

These files can be removed or archived to different directories at intervals using the OmPdCleanup GUI. Other artifacts from Physical Media production are cleaned up regularly after each request is shipped or canceled by the Order Manager Server in a call to OmPdCleanup.pl. OmPdCleanup.pl, which runs on the physical media box, cleans up the staging directory, the Rimage control file, the ISO image file, and the files used to build the jewel case insert file.

4.11.17.1 OmPdCleanup GUI Location

The OmPdCleanup GUI is located under /usr/ecs/\$MODE/CUSTOM/utilities

The location of the archive directory is configurable in /usr/ecs/\$MODE/CUSTOM/cfg/EcOmPdModule.CFG

Table 4.11.17-1 describes the common ECS operator functions performed through the OmPd Cleanup Manager.

Table 4.11.17-1. OmPd Cleanup Manager Common Operator Functions (1 of 2)

Operating Function	GUI Controls	Description
Remove or Archive DebugLog files	Radio button & edit field	Delete or archive the individual debug logs left by EcOmPdModule. The location of these files is configurable in /usr/ecs/\$MODE/CUSTOM/cfg/EcOmPdModule.CFG but are usually found in /usr/ecs/MODE/CUSTOM/logs on the dig06 box. The names of these files are Request_Volume.log
Remove or Archive the Summary files	Radio button & edit field	Delete or archive the summary files. The location of these files is in /usr/ecs/\$MODE/CUSTOM/data/OMS/PDS/summary
Remove or Archive the Label Directory files	Radio button & edit field	Delete or archive the Jewel Case Insert files, tape label files, and any other files left under /usr/ecs/\$MODE/CUSTOM/data/OMS/PDS/label from an incomplete request cleanup
Remove or Archive the QC Reports and the QC logs	Radio button & edit field	Delete or archive the QC log, the QC Summary file, and any of the individual QC Reports. These are found under: /usr/ecs/\$MODE/CUSTOM/data/OMS/PDS/QC

Table 4.11.17-1. OmPd Cleanup Manager Common Operator Functions (2 of 2)

Remove staged files	Checkbox & edit field	This removes any files under /usr/ecs/\$MODE/CUSTOM/data/OMS/PDS/PM. This should only be left over staging directories and the OmPdCleanup.pl log
Setting the cleanup time.	Radio button & edit field	Sets the daily cleanup time for the crontab.

4.11.17.2 OmPdCleanup GUI Startup

1. Make sure that a crontab for cmshared exists on the dig06 box – the application will give an error if the crontab file does not exist.
2. If running for the first time remove ~/.pdscleanup if it exists.
3. setenv \$MODE
4. Make sure that your DISPLAY variable is set.
5. From the command line run: /usr/ecs/\$MODE/CUSTOM/utilities/OmPdCleanupGUI

pdscleanup

When the OmPdCleanup GUI starts up it reads ~/.pdscleanup. If this file exists and belongs to an earlier version the GUI may complain and fail to come up. If this is the case, delete the existing ~/.pdscleanup.

Legacy PDS Cleanup GUI

It should not conflict with the legacy PDS cleanup manager because the legacy cleanup manager should be editing the pds' account crontab and the pdscleanup file in the pds account home directory.

Make sure there is an existing crontab file. It will fail on exit if the crontab file does not already exist. If this is the case just run crontab -e and enter some commented text. Then rerun OmPdCleanup GUI.



Figure 4.11.17-1. OmPdCleanup GUI Dialog Box

Running the GUI creates 3 files:

- `~/pdscleanup`
 - Startup options
- `/usr/ecs/$MODE/CUSTOM/utilities/cleanup.sh`
 - Contains the ksh commands to move or delete files over a certain age
- `crontab`

4.11.17.3 Trouble Shooting

Set environment variables DISPLAY and MODE

When it starts up it reads ~/.pdscleanup. If this file exists and belongs to an earlier version the GUI may complain and fail to come up. If this is the case, delete the existing ~/.pdscleanup.

It should not conflict with the legacy PDS cleanup manager because the legacy cleanup manager should be editing the pds' account crontab and the .pdscleanup file in the pds account home directory.

It will fail on exit if the crontab file does not already exist. If this is the case just run crontab -e and enter some commented text. Then rerun OmPdCleanup GUI.

4.11.17.4 OmPdCleanup GUI Main Screen

The OmPdCleanup GUI dialog box (Figure 4.11.17-1) contains options to delete or archive debug logs, summary files, label files and QC artifacts. It also allows for the deletion of stale staging directories resulting from incomplete runs. Lastly the dialog box has fields to direct the timing of the cron.

4.11.17.5 Required Operating Environment

The following environment is required for the OmPdCleanup GUI to work properly:

- The O/S requirements are Irix65 or higher

4.11.17.6 Databases

The OmPdCleanup GUI does not access any databases.

4.11.17.7 Special Constraints

There are no special constraints to running the OmPdCleanup GUI.

4.11.17.8 Outputs

There are no outputs from the OmPdCleanup GUI except for the error messages.

4.11.17.9 Event and Error Messages

The OmPdCleanup GUI writes no status and error messages.

4.11.17.10 Reports

The OmPdCleanup GUI does not generate reports.

4.12 Common Services Tools

This section describes the tools used by DAAC operators on a day-to-day basis:

1. Common Desktop Environment (CDE) Tool
2. Microsoft Office Professional
3. Netscape Communicator
4. Sun ONE Web Server
5. EOSView
6. ASTER On-Demand Product Request Form (ODFRM)
7. Subscription Server
8. Batch Insert Utility
9. Data Pool Cleanup Utility
10. Update Granule
11. Data Pool Access Statistics Utility (DPASU) – Rollup Scripts
12. Data Pool Access Statistics Utility (DPASU) – Maintenance Scripts
13. Most Recent Data Pool Inserts Utility
14. Data Pool Collection-to-Group Remapping Utility
15. Data Pool QA Update Utility
16. Data Pool Move Collections Utility
17. Data Pool Hidden Scrambler Utility
18. OWS Binding Utility
19. Operability GUI

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4.12.1 Common Desktop Environment (CDE) Tool

The ECS uses the Common Desktop Environment (CDE) Tool COTS package to manage X windows. It is a commercial graphical user interface for UNIX supporting AIX, Digital UNIX and Solaris operating systems. It provides users registered at an ECS site with generalized support for performing the basic operations listed in Table 4.12.1-1.

Table 4.12.1-1. Common ECS Operator Functions Performed with CDE

Operating Function	GUI	Description	When and Why to Use
Start a desktop session	Basic login with userid and password	Invokes the CDE window manager.	Access an ECS host.
Use the Front Panel	Front Panel window	Contains set of controls for performing common tasks (i.e., calendar, email, clock, print, file management).	As needed during work session.
Manage files	File Manager	File management tool.	Perform file navigation/manipulation.
Use Application Manager	Application Manager	How to run applications using Application Manager, the main repository for applications in CDE.	Need to invoke applications.
Customize the desktop environment	Style Manager	Allow for customizing the look and behavior of desktop.	Need to customize desktop environment.
Use text editor	Text Editor	Supports creation/editing of short documents (e.g., memos, mail, resource files).	Need to create short documents.
Print	Printing	Explains how to access printers.	Need to print/change default printer.
Use Terminal	Terminal	Explains how to display and customize terminal emulator windows on desktop.	Need to access control terminal window.
Use Icon editor	Icon Editor	Creates files for use as desktop icons or backdrops.	Need to create icons/backdrops.
Use Image Viewer	Image Viewer	Allows for capture, viewing, editing, printing, and translation of monochrome/color image files.	Need to perform image manipulation.

4.12.1.1 Quick Start Using the Common Desktop Environment (CDE) Tool

After being registered as an ECS user by the site administrator, the user accesses the CDE window manager by logging into an ECS host using a defined UserID and password.

4.12.1.2 CDE Main Screen

Figure 4.12.1-1 presents an example of the type of support provided by the CDE Window Manager.

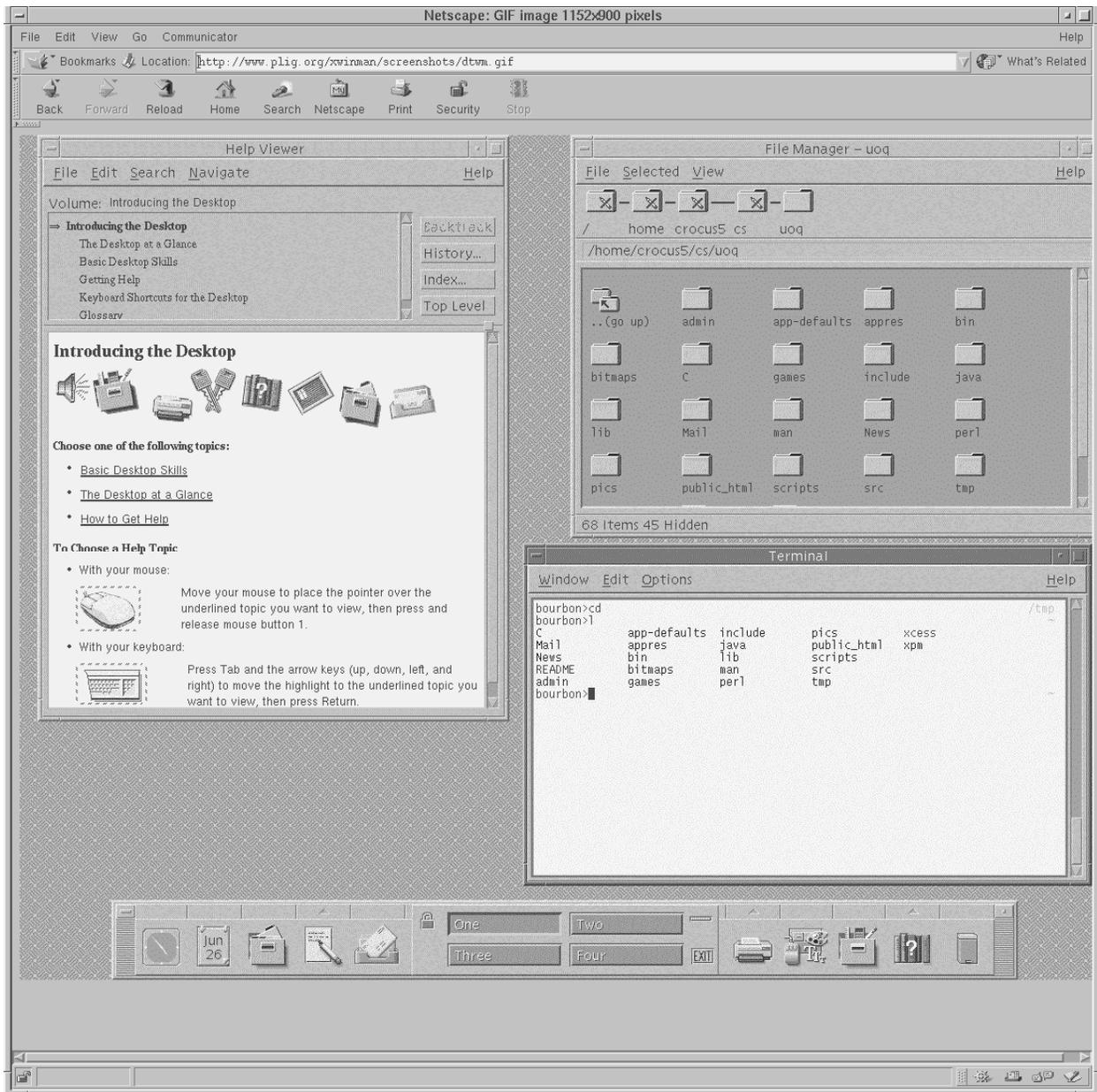


Figure 4.12.1-1. Example of CDE Window Manager Support Features

The Front Panel window at the lower part of the screen contains a set of icons allowing access to common support features. Through this panel the user can obtain time, date, monitor schedule,

access email, edit text files, print, access file manager to navigate the file system, and application manager to invoke and manage custom applications.

The Help Viewer window to the left of the screen is a support feature the user can invoke to obtain detailed online explanation of CDE support capabilities.

The File Manager window at the upper right of the screen supports navigating the file system and creating, deleting, and moving file objects.

The Terminal window below the File Manager on the screen allows Unix command line access to operating system services.

In addition to the help accessible to the online user, detailed documentation of CDE capabilities from the user standpoint and the system administrator are available from the Sun vendor at the web location:

<http://docs.sun.com>.

4.12.1.3 Required Operating Environment

Refer to the Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide available at the Sun vendor's documentation link.

4.12.1.4 Databases

None.

4.12.1.5 Special Constraints

Access to CDE is available only to registered users of ECS sites.

4.12.1.6 Outputs

The Common Desktop only outputs event and error messages.

4.12.1.7 Event and Error Messages

CDE issues both status and error messages to the operator screen. Error messages are listed in the CDE support documentation accessible at the web link:

<http://docs.sun.com>.

4.12.1.8 Reports

None.

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4.12.2 Microsoft Office Professional

EMD provides Microsoft Office Professional to the DAACs to support general office automation tasks. Table 4.12.2-1 lists the operational tasks supported in the Office Professional package.

Table 4.12.2-1. Common ECS Operator Functions Performed with Microsoft Office

Operating Function	GUI Program	Description	When and Why to Use
Word processing	Microsoft Word	Allows operator to create, edit, open, save, and print documents. Allows incorporation of material generated in Excel and PowerPoint.	To create and maintain DAAC policies and procedures.
Develop a spreadsheet	Microsoft Excel	Allows operator to manage, format, chart and analyze data imported from the MSS database.	Imports data from the MSS database to create a report on an as needed basis.
Develop a presentation	PowerPoint	Allows operator to produce presentation slides, drawings, handouts, speaker notes, outlines and graphs. Allows incorporation of material generated in Excel and Word.	To develop briefings on an as needed basis.
Develop a database	Microsoft Access	Allows operator to define, create, and maintain databases. Allows operator to query database information and generate reports.	Provides support for as-needed database querying and reporting. Allows export of data to Word and Excel for analysis.

4.12.2.1 Quick Start Using Microsoft Office Professional

Microsoft's Program Manager contains the Microsoft Office Professional icon, which can be selected to provide Excel, Word, PowerPoint, and Access icons that launch the applications. Refer to the following Microsoft documentation for more details about its applications:

Microsoft Word User's Guide

Microsoft Excel User's Guide

Microsoft PowerPoint User's Guide

Microsoft Access User's Guide

The documentation of Microsoft Office Professional used as a basis and referenced in this section, is for use with the Windows XP operating system.

Microsoft Office Professional is installed exclusively on PCs.

4.12.2.2 Invoking Microsoft Office Professional

On a PC running Windows XP, the Microsoft Office Professional products can be invoked from the Office toolbar (if present) or the “Start” menu on the desktop display.

4.12.2.3 Required Operating Environment

For all COTS packages, appropriate information on operating environments, tunable parameters, environment variables, and a list of vendor documentation can be found in a Configuration Management controlled document for each product.

4.12.2.3.1 Interfaces and Data Types

The Microsoft Office Professional applications Word, Excel, PowerPoint, and Access work alike and interface with each other as if each were a single program.

4.12.2.4 Databases

The individual Microsoft Office products maintain their “products” in proprietary file structures:

MS Word = **.doc**

MS EXCEL = **.xls**

MS PowerPoint = **.ppt**

MS Access = **.mdb**

Each release of these products can accept output from previous releases of the same product, and generally, their competitor’s products available at the time of their release. However, they may not be able to use the same file extension name structures created by a later release. See the Special Constraints Section 4.12.2.5 below.

4.12.2.5 Special Constraints

The version of Microsoft Office Professional installed is Office 2003 for Windows XP. Users must take care when importing files (.doc, .xls, .ppt, and .mdb) and ensure the files are not produced by a later version of these products.

4.12.2.6 Outputs

The Microsoft Office Professional products display their outputs on screen and produce printed output appropriate to the product.

4.12.2.7 Event and Error Messages

Microsoft Office Professional provides help windows to identify and explain any Microsoft Office error messages.

4.12.2.8 Reports

Refer to the associated Microsoft User Guide for detailed information on the generation of reports using Word, Excel, PowerPoint, and Access.

4.12.3 Netscape Communicator

Netscape Communicator is a GUI interface for browsing the World Wide Web (WWW) and for obtaining information from other sources. Some of the Netscape Communicator functions are:

- View/process text/html files as well as other MIME formats
- Provide an interface to Telnet, Gopher, FTP, Email, and Newsgroups
- Read content of bulletin boards on the world-wide-web

Netscape Communicator is used to perform the following operator functions listed in Table 4.12.3-1. Please refer to the Netscape Communication's Help option for additional information on functionality not explicitly mentioned here.

Table 4.12.3-1. Common ECS Operator Functions Performed with Netscape Communicator (1 of 2)

Operating Function	Command/Action	Description	When and Why to Use
View Web Pages	Main window	<ul style="list-style-type: none"> • Operator views pages written in HTML source code. • These pages provide images, text, and form templates. 	To obtain information and to process user-interactive forms.
Process Forms	Main window	<ul style="list-style-type: none"> • Forms are provided for operator input. • Certain operations require a password. 	Used to search or manipulate the existing database (functions add, delete, modify.)
Read a message and attachments	Netscape Mail and Discussions window	Allows the operator to read messages received. If there are any file attachments, they can also be read or processed if they are not text files.	To read a message and if applicable, read or process an attachment.
Reply to a message	Compose Window	Allows the operator to send a message to the originator of the message received or to all recipients of the original message.	To send (reply) messages to the originator of a message or all recipients of the message with an option to include the original message in the reply.

Table 4.12.3-1. Common ECS Operator Functions Performed with Netscape Communicator (2 of 2)

Operating Function	Command/Action	Description	When and Why to Use
Send a new message	Compose Window	Allows the operator to create and send a message. Text or binary files can be attached to the message.	To send a new message to one or more recipients with attached files.
Delete/undelete messages	Netscape Mail and Discussions window	Allows the operator to mark messages for deletion. The messages are permanently deleted when the Update option is selected or when quitting Messenger Mailbox. Messages can only be undeleted before Update is selected or before quitting Messenger Mailbox.	To delete messages and free disk storage space.
Browse Bulletin Boards (BB)	Netscape Message Center window	Allows for exchange of information with users and scientists that share the same interest.	To ask or provide information on the BB subject to a large community of users.

4.12.3.1 Quick Start Using Communicator

For more information, the Netscape Communication's Help option is available online (Open the "Help" pulldown menu from the Netscape Communicator main screen and select Help Contents. The main page with the contents of the Netscape Help appears. The operator can select subjects he/she is interested in by following the available links. By opening the "File" menu on the main page and selecting "Print" , a hardcopy of the displayed text can be obtained.

4.12.3.1.1 Command Line Interface

To execute Netscape Communicator from the command line prompt use:

> netscape &

4.12.3.2 Netscape Communicator Main Screen

Once invoked, Netscape Communicator displays the startup screen shown in Figure 4.12.3-1.

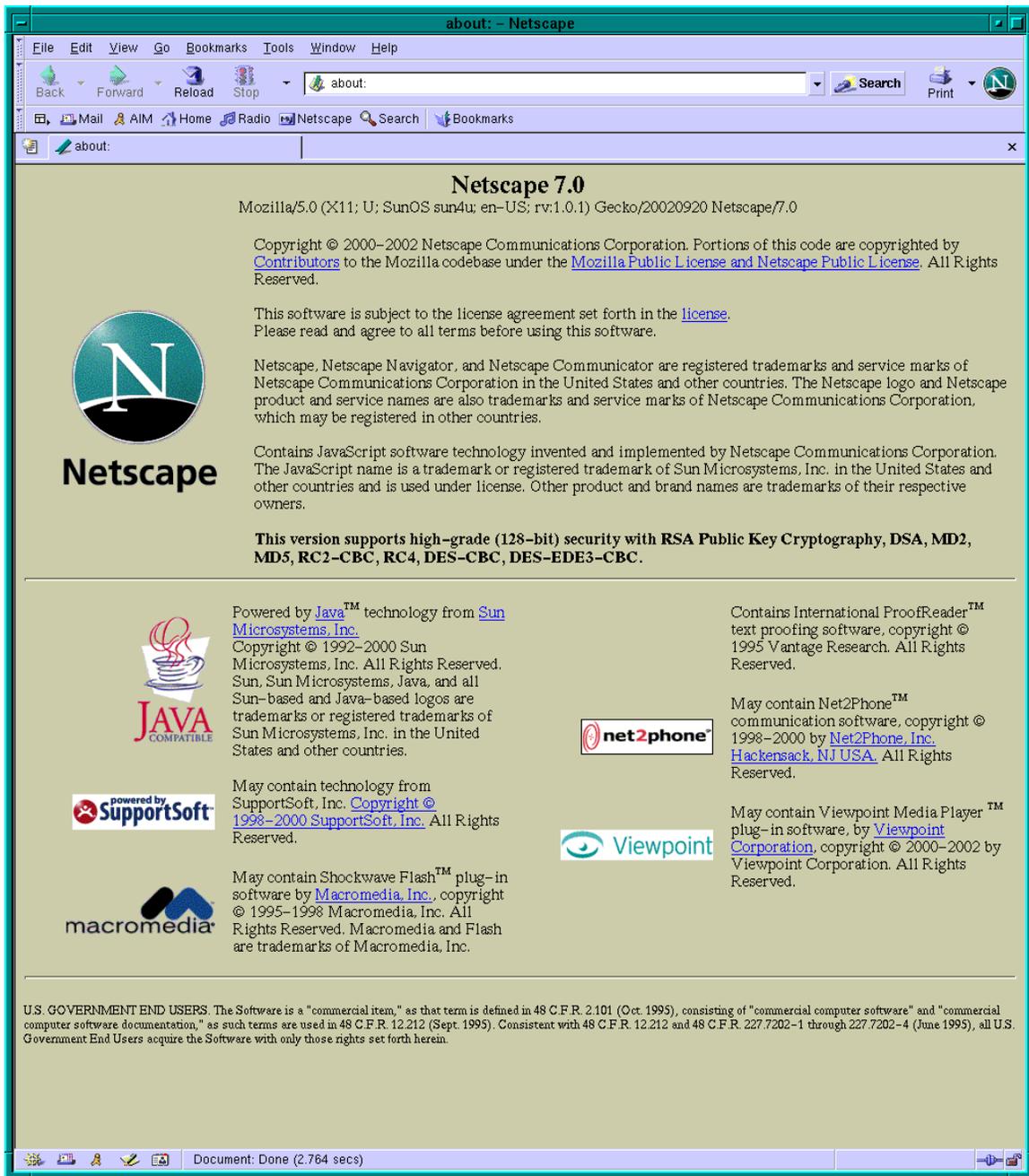


Figure 4.12.3-1. Netscape Communicator: Browser with Display Field

Clicking the mouse anywhere in the startup screen causes the browser to display the user's selected home page. An example of a home page is the ECS Data Handling System page shown in Figure 4.12.3-2.

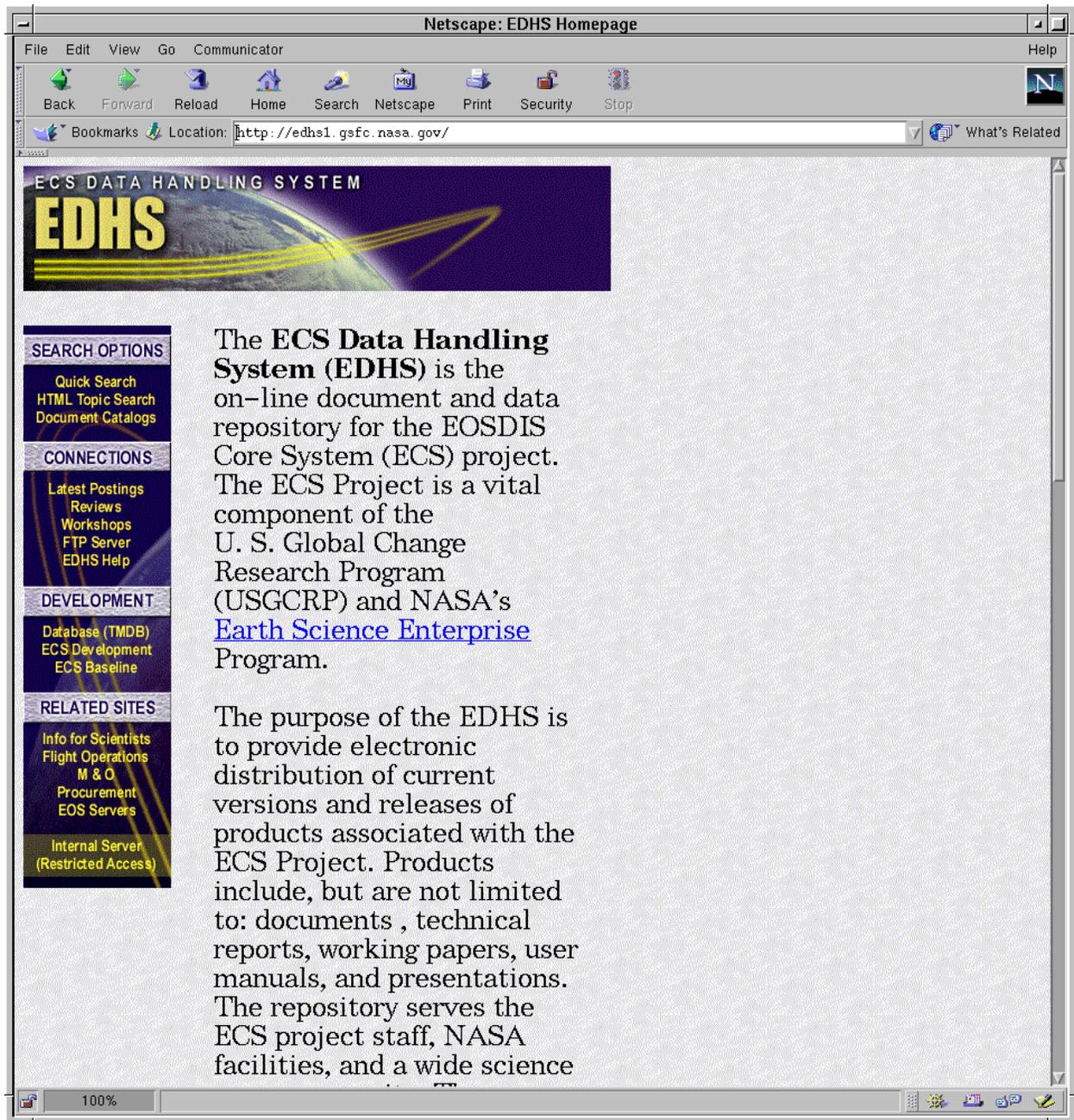


Figure 4.12.3-2. Netscape Communicator: EDHS Home Page

From the start-up Netscape Communicator screen, the operator has several choices for loading pages in any of the MIME formats known by Netscape Communicator:

- Move the cursor to a link in the display field and click on this link
- Select a URL from the “Bookmarks” pulldown menu

- Click on “File” and then “Open Page” of the Netscape Communicator Toolbar to enter a URL address or a file
- In the “Location” text field beneath the Toolbar and Directory Buttons, type Ctrl+U (^U) to erase the line and type the desired URL
- Modify a URL displayed in the “Location:” text area. Use the mouse to select the portion to be changed, press <Backspace> to delete the highlighted text, and enter the new text

It is recommended that operators have bookmarks of pages to be accessed frequently (file bookmarks.html in the ~/.netscape directory). Refer to the *Netscape Communicator Reviewer’s Guide* for further details.

Buttons at the lower right corner of the screen provide direct access to functionality provided by, respectively, the browser, the mail message, the discussion group, and the composer windows.

4.12.3.3 Required Operating Environment

For all COTS packages, appropriate information on operating environments, tunable parameters, environment variables, and a list of vendor documentation can be found in a CM controlled document for each product. To find the documentation for Netscape, refer to the ECS Baseline Information System web page, URL <http://cmdm.east.hitc.com/>.

4.12.3.4 Databases

Netscape Communicator can interface with Sybase tables via CGI programs when operators process forms. Refer to the appropriate sections for the databases used by ECS tools accessible via Netscape.

While these databases are not directly required for the operation of Netscape Communicator, some form processing features would be hampered if the interface to these databases does not work.

4.12.3.5 Special Constraints

None.

4.12.3.6 Outputs

Netscape Communicator provides the outputs listed in Table 4.12.3-2 below.

Table 4.12.3-2. Netscape Communicator Outputs

Output	Description and Format
Screen Display	Shows the Netscape Communicator browser GUI screen and adjusts to the screen format.
Hardcopy of Display Window	Printed version of the contents of the display window.
Display Window saved to disk	Contents of the display window can be saved to disk in Text, Source or Postscript format.
Modified, deleted or created data files	Processing of forms allows the operator to modify, delete or create data files.

4.12.3.7 Event and Error Messages

Netscape Communicator issues both status and error messages to document the status of loading a document or to display the reason for not loading a document. For further information, refer to the *Netscape Communicator Handbook*.

4.12.3.8 Reports

None.

4.12.4 Sun ONE Web Server

Sun ONE Web Server, 6 Service Pack 6 is a multi-process, multi-threaded, secure web server built on open standards. It provides high performance, reliability, scalability, and manageability for any size enterprise, and it includes modules for creating and managing Web content, for extending or replacing functions of the server (e.g., through Java servlets and JavaServer pages), and for providing application-specific services such as security and access control.

In ECS, Sun ONE Web Server is used by several subsystems to access HTML files and to service web-based applications. It is installed locally on machines that run ECS applications relying on it. A distinct instance of a Sun ONE Web Server is created for each such application, one per mode in which the application runs. For example, ECS' Order Manager, Data Pool GUI, and BMGT all need to use Sun ONE Web Server, and each of them runs in the three modes on sites' Data Pool Server machines. Consequently, nine instances of the Sun ONE Web server are required - one for each of the three applications in each mode. Applications communicate with the appropriate instance via a unique port number. The port numbers these Sun Web Servers use can be found in the ECS baseline document, 910-TDA-002, ECS Software Port Mapping Baseline.

An additional instance of the Sun ONE Web Server known as the Administration Server is created whenever Sun ONE Web Server is installed on a machine. You use it to manage all Web Server instances.

Table 4.12.4-1 summarizes the Sun ONE Web Server functions used by ECS and references vendor guides that describe their use. Release Notes are available on the Internet at <http://docs.sun.com/source/816-6770-10/rn60sp6.html>.

Table 4.12.4-1. Common ECS Operator Functions Performed with the Sun ONE Web Server (1 of 3)

Operating Function	Command/Script	Description	When and Why to Use
Administer <i>Sun ONE</i> web servers	Administration Server GUI	Allow operators to add and remove web server instances.	When applications needing web servers are installed or removed.
Set Administration Preferences	Administration Server GUI	Allow operators to: <ul style="list-style-type: none"> • Stop the Administration Server • Edit its listen socket settings • Change the user account under which its processes run • Change its superuser settings • Specify log file options, including log file rotation • Configure JRE paths 	When <i>Sun ONE</i> is installed and when the Administration Server needs reconfiguration.
Provide security and encrypt transactions	Administration Server GUI	Allow operators to: <ul style="list-style-type: none"> • Create a trust database • Request, install, and manage VeriSign and other server certificates • Install and manage certificate revocation lists (CRLs) and compromised key lists (CKLs) • Enable client authentication 	As needed to activate security features designed to safeguard data, deny intruders access, and allow access to those authorized.

Table 4.12.4-1. Common ECS Operator Functions Performed with the Sun ONE Web Server (2 of 3)

Operating Function	Command/Script	Description	When and Why to Use
Configure web servers	Server Manager GUI	Allows operators to: <ul style="list-style-type: none"> • Start and stop web server instances • Adjust performance settings • Edit configuration file (magnus.conf) settings and apply them to the server • Add and edit listen sockets • View, manage, and archive logs • Monitor server activity and quality of service • Edit file cache settings 	As needed to improve web server performance, troubleshoot problems, and support use by ECS custom code.
Analyze log files	Server Manager GUI Administration Server GUI	Allows operators to: <ul style="list-style-type: none"> • View access logs • View error logs • Set logging preferences 	As needed to monitor and troubleshoot web server activities.
Monitor servers	Server Manager GUI	Allows operators to: <ul style="list-style-type: none"> • Compile and view a variety of server performance statistics in real-time • Set bandwidth and max connections parameters for enforcing quality of service policies 	As needed to monitor, manage, and troubleshoot web server activities and to tune server performance.

Table 4.12.4-1. Common ECS Operator Functions Performed with the Sun ONE Web Server (3 of 3)

Operating Function	Command/Script	Description	When and Why to Use
Program the server	Class Manager GUI	Allows operators to: <ul style="list-style-type: none"> • Install CGI programs, Java Servlets and JavaServer Pages • Configure how the server is to run them 	When installing new server-side applications or changing how the applications are to be run.
Manage server content	Class Manager GUI	Allows operators to: <ul style="list-style-type: none"> • Set primary and additional document directories • Configure document preferences • Configure URL forwarding • Customize error responses • Specify a document footer • Restrict the use of file symbolic links • Set the server to parse HTML files • Set cache control directives 	When creating or altering web server instances, to specify where documents to be served are located. When customized responses to client requests are warranted. When restrictions are needed on information cached by proxy servers.

4.12.4.1 Quick Start Using Sun ONE Web Server

Sun ONE Web Servers are managed with the help of the following four user interfaces:

- Administration Server – contains the Java forms for managing, adding, removing, and configuring web server instances
- Server Manager - contains the Java forms for configuring individual instances of web servers and for adding and configuring classes of virtual servers
- Class Manager – contains the Java forms for managing, adding, removing, and configuring virtual servers. Virtual servers allow you, with a single installed server, to offer companies and individual domain names, IP addresses and some server administration capabilities. A default virtual server is created automatically for each web server instance
- Virtual Server Manager – contains pages that allow you to see and edit all the settings for a single virtual server

Note: ECS currently uses multiple instances of the web server rather than virtual servers. In past releases, Sun ONE Web Server’s virtual servers did not support unique configuration information.

The Server Manager, Class Manager, and Virtual Server Manager are accessed from the Administration Server GUI. The Administration Server must be running before the operator can access the Administration Server GUI.

4.12.4.1.1 Command Line Interface

The preferred method for starting the Administration Server operationally is to type the following as root:

```
# /etc/init.d/iplanetadm start
```

This starts the administration server using the port specified during installation.

To start the Administration Server GUI and proceed to access the functionality discussed in Section 4.12.4.1, start a web browser then enter the URL for the administration server as follows:

```
http://<servername>.<ECSdomain>.<domain>:<portnumber>
```

The operator is then prompted for a username and a password. Once this information is entered the Administration Server web page appears as shown in Figure 4.12.4-1.

Note: The browser used for this task must be capable of supporting frames and JavaScript. Netscape Communicator 7.0, included in the ECS baseline, is capable of supporting both frames and Java Script.

4.12.4.2 Sun ONE Web Server Main Screen

The Administration Server GUI is Sun ONE's main web server screen. It is used to administer all Sun ONE Web Server instances. The screen has six tabs, each of which contains buttons for accessing Java forms to perform functions that govern the Administration Server or all the other web servers under its control. The tabs are:

- Servers tab (shown in Figure 4.12.4-1) - for adding (i.e., creating) and removing web server instances and invoking the Server Manager GUI. Operators invoke the Server Manager GUI by first selecting a web server from the tab's Select A Server pulldown menu, then pressing the Manage button
- Preferences tab – for stopping the Administration Server; setting runtime options for the Administration Server (such as process owner, port number, and logging parameters); and viewing the Administration Server's access and error logs
- Global Settings tab – for configuring or enabling a directory service, access control, Sun ONE's built-in cron facility, a Java runtime environment or development kit, and SNMP options applicable to all web servers under the Administration Server's control
- Users&Groups tab – for creating and modifying users, groups, and organizational units in an LDAP database. ECS does not presently use an LDAP database, so attempts to access this tab are rejected
- Security tab – for creating a trust database; obtaining, installing, and managing server certificates; and managing certificate revocation and compromised key lists for the Administration Server

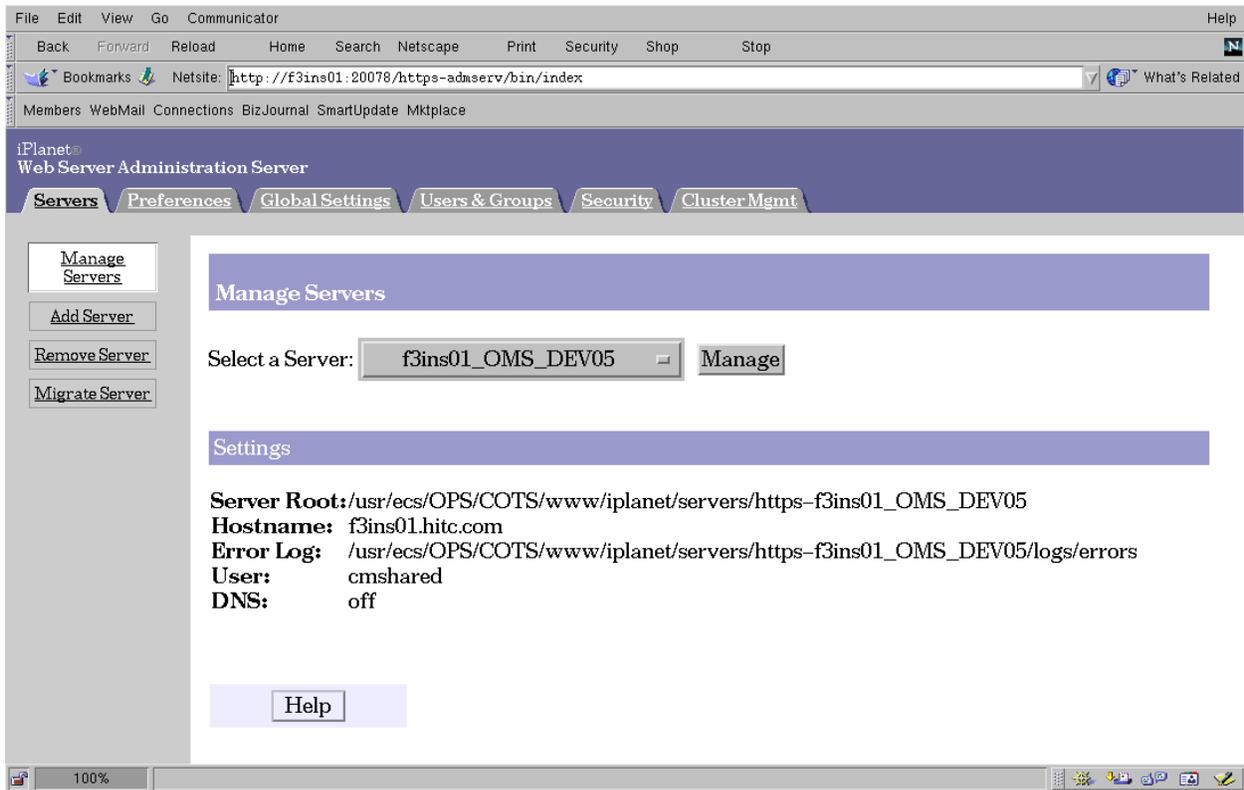


Figure 4.12.4-1. Sun ONE Web Server Administration Server Screen

- Cluster Management tab – for establishing and maintaining a group of Sun ONE Web Servers on multiple machines that can be administered by a single master Administration Server

4.12.4.2.1 Sun ONE Web Server: Server Manager Screen

Operators use the Server Manager GUI for managing a web server instance. (Web server instances are created via the Administration Server GUI.). The screen has eight tabs, each of which contains buttons for accessing Java forms to perform functions governing a single web server and its virtual web servers. The tabs are:

- Preferences tab (shown in Figure 4.12.4-2) – for starting and stopping the server and configuring runtime options for it such as port number, MIME types, caching, thread pools and performance tuning parameters
- Security tab – for creating a trust database; obtaining, installing, and managing server certificates; and managing certificate revocation and compromised key lists. This tab functions the same as the Security tab on the Administration Server GUI, but it applies to a web server other than the Administration Server

- Logs tab – for viewing and managing the web server’s access and error logs. Forms also let operators control the amount of information recorded in the access log, configure automatic rotation of log files, and generate statistics based on log contents
- Monitor tab – for monitoring a web server’s activity using built-in monitoring functions and SNMP, and for setting quality of service parameters (i.e., bytes per second and max connections)
- Virtual Server Class tab – for creating and modifying virtual server classes. It also provides access to the Class Manager GUI. By default, all virtual servers in a class have the same settings
- Java tab – for configuring Java features for a web server. This includes enabling web applications, servlets and JavaServer Pages (JSP), configuring Java Virtual Machine attributes, and managing session and JSP cache files
- Legacy Servlets tab – for specifying servlet properties as in Sun ONE 4.x
- Search tab – for searching the contents and attributes of documents on the web server. This tab supports creating and maintaining document collections, organizing and re-indexing collections at pre-determined times, and defining text search patterns, and configuring what users see when they get search results

Three buttons that appear above this screen’s tabs are:

- Server Manager – for choosing a different web servers to configure, including the Administration Server
- Class Manager – for invoking the Class Manager GUI to configure virtual servers for the web server
- Apply – for placing configuration changes into effect

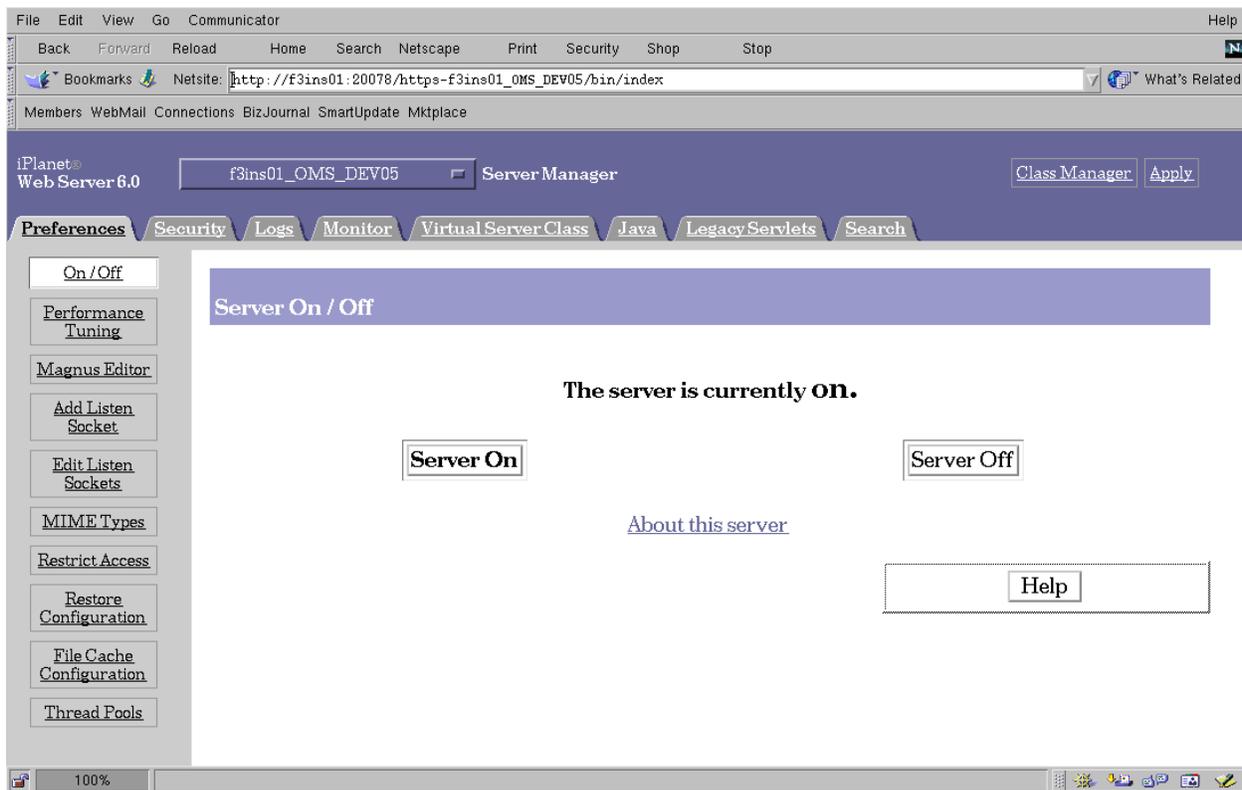


Figure 4.12.4-2. Sun ONE Web Server: Server Manager Screen

4.12.4.2.2 Sun ONE Web Server Class Manager Screen

Operators use the Class Manager GUI to create and configure virtual web servers for a web server instance. The Class Manager contains settings that affect a single class or single virtual server. You can set services for the class in the Class Manager, as well as add virtual servers (members of the class) and configure settings for an individual virtual server.

The screen has four tabs, each of which contains buttons for accessing Java forms to perform functions governing all the classes of virtual servers for the web server. The tabs are:

- Virtual Servers tab (shown in Figure 4.12.4-3) – for managing and creating virtual servers and editing basic virtual server properties. Preferences set via this tab govern MIME types, access control lists, quality of service, logging, web applications, and CGI programs used by the virtual servers. The tab also provides access to the Virtual Server Manager GUI. By default, all virtual servers in a class have the same settings.
- Programs tab – for configuring the CGI programs for the virtual server class. Use this tab to specify the location and query handler (if any) of your CGI programs as well as the prefix that URLs can use as an alias for the path to the programs.

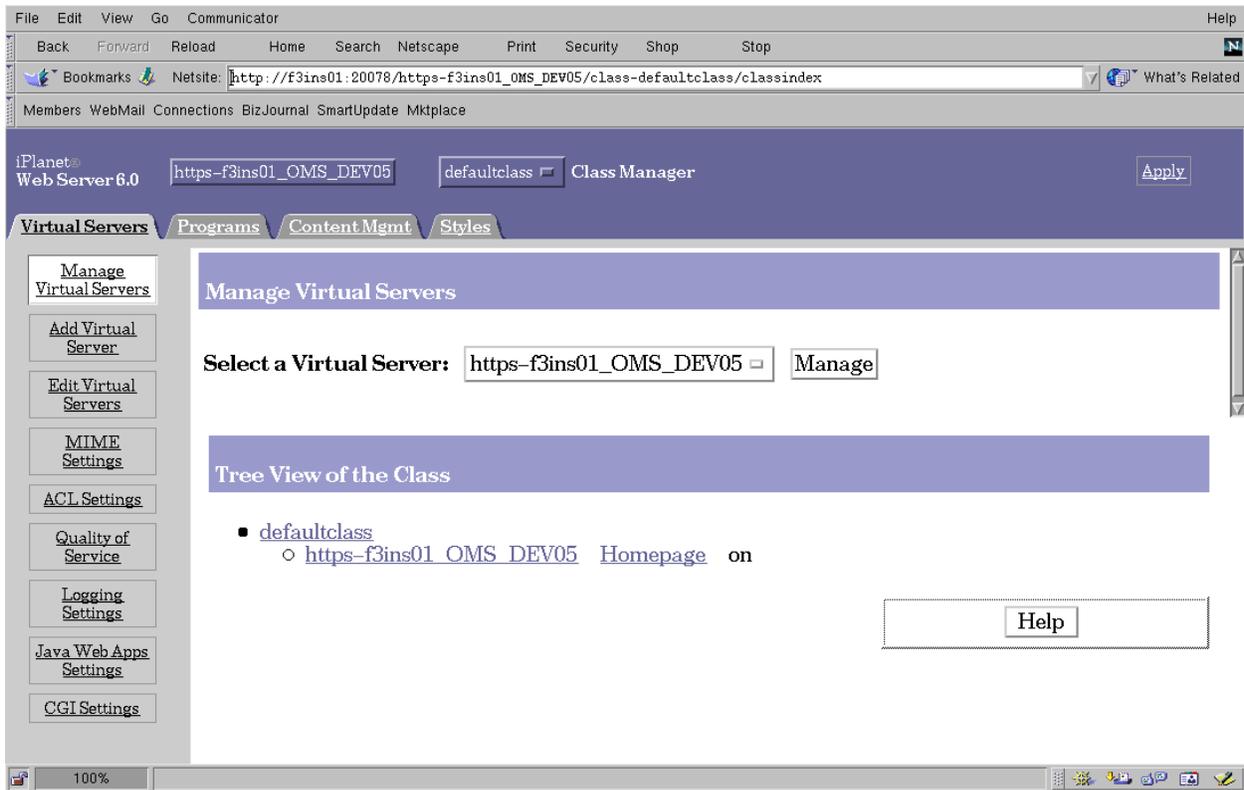


Figure 4.12.4-3. Sun ONE Web Server Class Manager Screen

- Content Management tab – for managing the web content that the class of virtual servers supports. Use this tab to specify paths to your root and additional document directories, establish directories where users can create and store their own home pages and documents, and define various properties governing how requests for content are to be handled
- Styles tab – for creating, editing, and applying configuration *styles* to files and directories. A style is a collection of predefined options that facilitates assigning properties for the web server’s handling of files and directories

The three buttons appearing above this screen’s tabs are:

- Server Manager – for returning to the Server Manager GUI
- Class Manager – for selecting a different class of virtual servers to manage
- Apply – for placing configuration changes into effect

4.12.4.2.3 Sun ONE Web Server Virtual Server Manager Screen

Operators use the Virtual Manager GUI to configure a single virtual server. The Virtual Server Manager contains settings that affect a single virtual server. These settings override those initially inherited from the server’s class. The screen has the following two tabs:

- Status tab (shown in Figure 4.12.4-4) – for viewing certain, key attributes of the virtual server. Two of the attributes are hyperlinks to pages for browsing the server’s access and error logs.
- Settings tab – for specifying values for most of the virtual server’s configurable attributes. These attributes (discussed previously), including document root, log file locations, access control lists, MIME types, and CGI parameters.

Four buttons that appear above this screen’s tabs are:

- Server Manager – for returning to the Server Manager GUI
- Class Manager – for selecting a different class of virtual servers to manage
- Virtual Server Manager – for selecting a different virtual server to manage
- Apply – for placing configuration changes into effect

4.12.4.3 Required Operating Environment

In ECS, the Sun ONE Web Server is deployed to run on Sun machines under Solaris 8. Operators must have Netscape Communicator version 7.0 or higher and Java and cookies enabled in their browsers to use it.

4.12.4.4 Databases

The Sun ONE Web Server uses an internal, trust database to store public and private keys in support of Secure Socket Link encryption. The Administration Server and each server instance can have its own trust database. In addition, Sun ONE Web Server allows operators to define one or more Lightweight Directory Access Protocol (LDAP) databases that virtual servers can use for user authentication. The web servers themselves do not manage LDAP databases, and ECS does not currently use them. Refer to the *Sun ONE Web Server, Enterprise Edition, Administrator’s Guide* for further information on databases used by the Web Server.

4.12.4.5 Special Constraints

None.

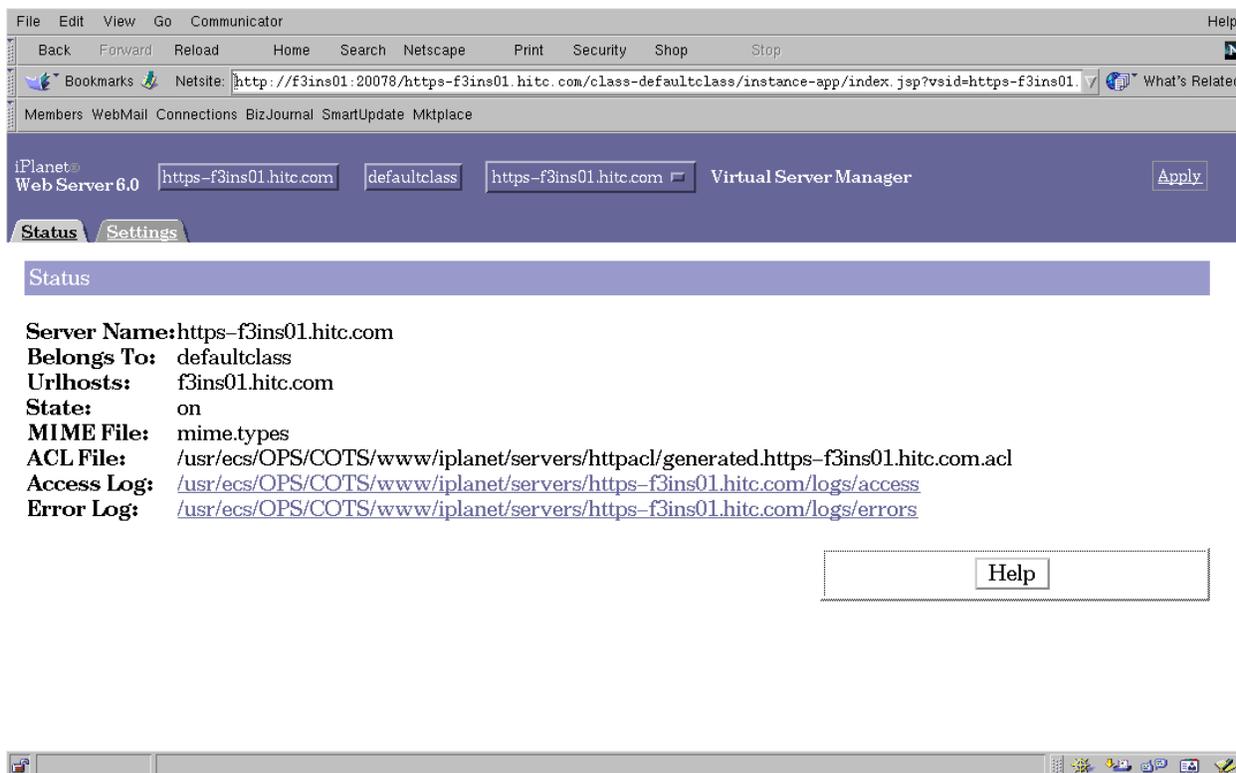


Figure 4.12.4-4. Sun ONE Web Virtual Server Manager Screen

4.12.4.6 Outputs

The Web Server supports real-time monitoring of web servers' activities. After enabling statistics, operators can view data about connections, the Domain Name Service (DNS), keep alives, cache and virtual servers. These can help them identify how many resources their servers need. Examples include:

- Number of idle (i.e., awaiting connection) threads
- Number of threads dealing with reading requests
- Number of threads dealing with writing responses
- Number of threads dealing with resolving hostnames
- Number of KeepAlive hits and flushes
- Number of DNS cache hits and misses

Additionally, server monitoring provides totals such as:

- Number of bytes received and sent
- Total requests
- Number of requests by type
- Number of connections

Enable and monitor statistics using the Monitor Current Activity page, which is accessible from the Monitor tab of the Server Manager GUI. See the *Administrator's Guide*, Chapter 10, "Monitoring servers" for further information.

To monitor a greater variety of server statistics, use Sun ONE's *perfdump* utility. The utility must first be "installed" by editing the web server's *obj.conf* configuration file and restarting the server. Statistics can then be viewed by pointing a browser to <http://<host>/.perf>. See the *Performance Tuning, Sizing, and Scaling Guide* for details.

4.12.4.7 Event and Error Messages

Each web server uses two files to record server activity. The *access* log file records requests to the server and server responses. The *error* log file lists errors the server has encountered. Both files typically reside in the web server's logs directory, but operators can control their location. Operators can also have the system automatically archive these files. See the *Administrator's Guide* for details.

For *access* logs only, operators can control the amount and format of what gets logged. They can specify whether to log accesses, what format to use, and whether the server should spend time looking up the domain names of the clients when they access a resource. They can also specify the file be written in common logfile format, flexible log format, or a user customizable format. Specify preferences using the Log Preferences page of the Server Manager GUI or edit the web server's configuration files directly. See the *Administrator's Guide* and the *NSAPI Programmer's Guide* for details.

4.12.4.8 Reports

Operators can generate a report about a web server's activity using Sun ONE Web Server's log analyzer. The report can contain a variety of statistics such as:

- Total hits and totals for various types of errors
- Most recently logged events
- Most frequent users
- Most commonly accessed URLs, and URL accesses exceeding some threshold amount
- Hosts most often accessing the server, and hosts whose accesses exceed some threshold amount

Operators can choose which of the statistics to include in a report, and output can be generated in HTML or text. However, results depend on what events the operators have the web servers log.

Reports are initiated from the Generate Report page, which is accessible from the Logs tab of the Server Manager GUI. Operators can also run program *flexanlg* from the command line. Refer to the *Administrator's Guide*, Chapter 9 - "Using Log Files", for additional information.

4.12.5 EOSView

EOSView is a custom Hierarchical Data Format (HDF) file verification tool. It is for use by anyone who wishes to verify or inspect EOS data products in HDF EOS or HDF format. Users include EOS instrument team science software developers and data product designers, DAAC personnel, and end users of EOS data products, i.e., scientists and researchers.

EOSView displays the contents of HDF files and the contents of files containing HDF-EOS data. Individual objects can be selected for display. Displays include raster images, datasets in tables, pseudo-color images of datasets, attributes, and annotations. Simple animation can be performed for a file with multiple raster images.

EOSView has a unique interface for handling HDF-EOS data structures. The Swath/Grid/Point interface uses only HDF-EOS library calls. The EOSView operator does not see the underlying HDF structures but is prompted for which parts of the structure to view.

EOSView is used to perform the operator functions listed in Table 4.12.5-1.

**Table 4.12.5-1. Common ECS Operator Functions Performed with EOSView
(1 of 2)**

Operating Function	Command/Script or GUI	Description	When and Why to Use
Display HDF file contents	EOSView File Contents window	Looks at data file images, metadata, and auxiliary information.	To verify structures put in a file.
Display Raster Image	Image Display window	Displays Browse images, geolocated maps, etc multiple zoom features in image display available pan feature available multiple palettes available.	To view a snapshot of an image (not data).
Animate Raster Images	Animation Window	Presents, in order, images as they appear in each file.	To show a succession of movement (e.g., temperature adjustment from one image to the next).
Display of SDS data in table	SDS data table Vdata table	Displays a one or two dimensional list of data in a scrollable list.	To view/compare associated numbers.
Expand a Vgroup	Select "Vgroup" from File Contents window	Vgroups are logical groupings of information such as Vdata, SDS data, and images.	To view information by a certain subject (e.g., the information associated with Geolocation).

**Table 4.12.5-1. Common ECS Operator Functions Performed with EOSView
(2 of 2)**

Operating Function	Command/Script or GUI	Description	When and Why to Use
Pseudo-color display of SDS data	Image Display Window	Converts data into a visual image.	To view the pseudo-color image of an SDS table.
Display text objects	Text (Attributes) Window	Describes the types of data strings for an individual object or for an entire file.	To look at factors when doing computations (e.g., longitude/latitude).
Hypertext help	On-line Help	On-line help is available from all menu bars.	To help in the navigation and use of EOSView.
Swath/Point/Grid interface (HDF-EOS)	File Contents Display window for swath, point and grid files	View HDF-EOS objects at a high level (i.e., data types cannot be broken down).	To view segments of data in terms of swath, a point on the earth, and grid (e.g., lat/long) data.
Plot VData	EOSView Plot Window	Static line plot display of x and y data (from a Vdata Table).	To view line plot of data capabilities.
Plot SDS Data	EOSView surface/contour plot window	Surface or contour plot of SDS.	To view plots of SDS tables.

4.12.5.1 Quick Start Using EOSView

EOSView, once downloaded from *edhs1.gsfc.nasa.gov* using the ftp utility, is started from the UNIX command line by entering:

```
>>EOSView
```

4.12.5.1.1 Downloading EOSView

Downloading EOSView is accomplished using the ftp utility as follows:

```
>ftp edhs1.gsfc.nasa.gov
```

```
Name: anonymous
```

```
Password: <your e-mail address>
```

```
ftp>quote site group sdptk
```

```
ftp> quote site gpass ecs-tkit
```

```
ftp>cd eosview
```

(A README file is also provided in this directory.)

```
ftp>get README
```

(The *README* file answers many questions you have about running EOSView. Change to the eosview directory that matches your hardware.)

```
dec/
```

```
ibm/
```

```
sgi/
```

```
sun/  
source/
```

(Once in the directory set type to I, download the files, and exit.)

```
ftp>bin  
ftp>mget *  
ftp>bye
```

The following files are downloaded:

```
EOSView      (executable)  
eosview.csc  (hypertext on-line help file)  
eosview.uid  (user interface description file)  
eosview.dat  (IDL commands file)
```

If it is desired to view the EOSView source code, change to the source/ directory and download the file EOSVIEW_source.tar.Z. This is a compressed tar file. To unload the contents of this file, type:

```
>uncompress EOSVIEW_source.tar.Z  
>tar xvf EOSVIEW_source.tar
```

Section 4.12.5.3 identifies environment variable settings used by EOSView. These should be initialized prior to starting EOSView.

4.12.5.2 EOSView Main Screen

The EOSView Main Window shown in Figure 4.12.5-1 displays the current version of EOSView and date.

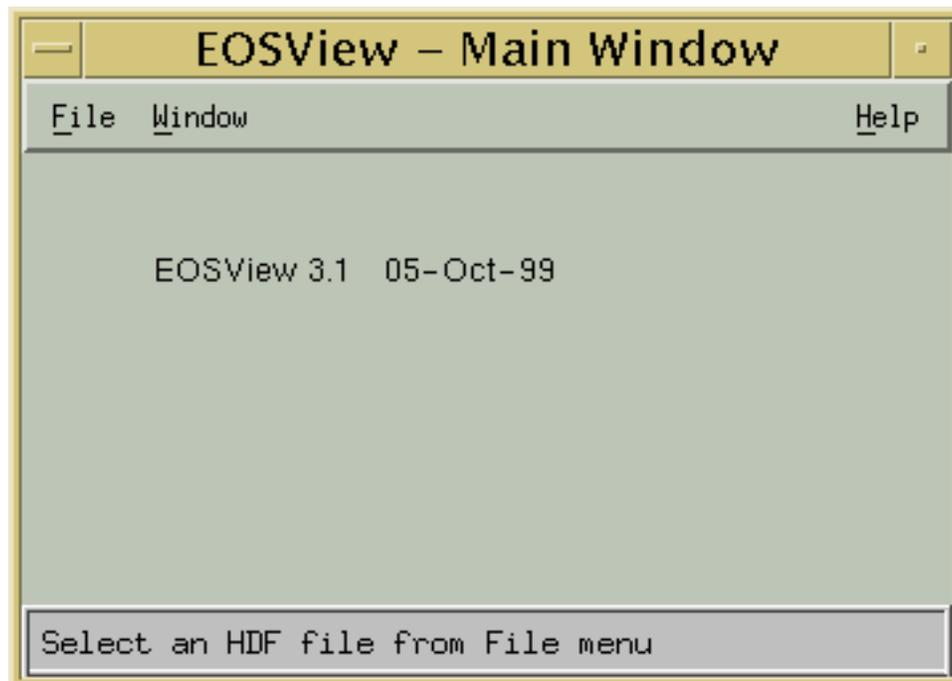


Figure 4.12.5-1. EOSView Main Screen

From the **File** pulldown menu, the operator can select Open or Exit.

- **Open** -- This causes a file selection dialog to appear (shown in Figure 4.12.5-2)
- **Exit** – Exits EOSView

From the **Window** pulldown menu, the operator can select an EOSView screen and have the focus change to that window as long as it is currently open. This feature is described in Section 4.12.5.2.21 “Window Pulldown Menu.”

From the **Help** pulldown menu, the operator can select help on context, on help, on window, keys, contents, index and version. This feature is described in Section 4.12.5.2.23 “Help Pulldown Menu.”

4.12.5.2.1 EOSView File Selection Dialog

Selecting **Open** from the EOSView File pulldown menu brings up the File Selection Dialog shown in Figure 4.12.5-2. This is a standard file selection dialog box allowing the operator to search through directories and select an HDF file.

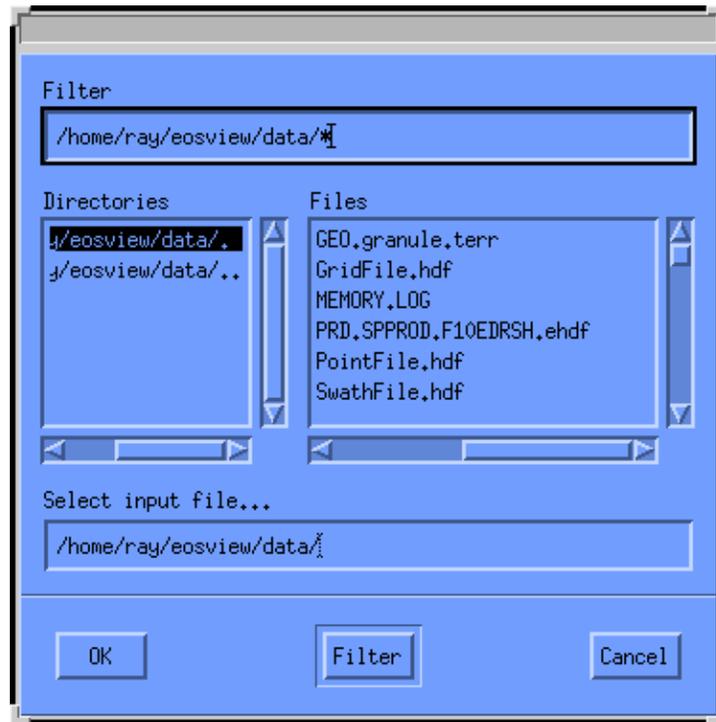


Figure 4.12.5-2. File Selection Dialog

Table 4.12.5-2 describes the File Selection fields.

Table 4.12.5-2. EOSView File Selection Field Description

Field Name	Data Type	Size	Entry	Description
Filter	System generated (can be edited)	Unlimited	Required	Displays file selection parameters to filter the directories.
Directories	Selection	Unlimited	Required	Displays a list of directories.
Files	Selection	Unlimited	Required	Displays a list of files to select from.
Select Input File	System generated (can be edited)	Unlimited	Required	Displays the filename selection.

In addition, the following pushbuttons are provided:

- **OK** – opens the specified file
- **Filter** – filters through the directories in layers until the desired directory/file is displayed
- **Cancel** – closes the file selection dialog

4.12.5.2.2 File Contents Display Pop-up

Once the HDF file has been selected, the EOSView File Contents Pop-up (see Figure 4.12.5-3) for that file appears. This is a scrollable window with the following menu items:

- The **F**ile pulldown menu (described in Section 4.12.5.2.21) provides additional information about a file and provides a way to close a file
- The **O**ptions pulldown menu (described in Section 4.12.5.2.20) and its Animated images selection becomes sensitized when the selected file contains multiple Raster Image Groups. This causes all the images to be lined up and displayed in order in an EOSView - Animation Window
- From the **W**indows pulldown menu, the operator can select an EOSView window and have the focus change to that window as long as it is currently open. This feature is described in Section 4.12.5.2.21 “Window Pulldown Menu”
- From the **A**tttributes pulldown menu (described in Section 4.12.5.2.22), the operator can view the global attributes for the selected HDF file
- From the **H**elp pulldown menu (described in Section 4.12.5.2.23), the operator can select help on context, on help, on window, keys, contents, index and version

To select an HDF object simply double-click on the object displayed in the scrollable window. Objects can be Numeric Data, Vdata, Vgroup, Raster Images, or Grid/Swath/Point data. Each of these objects are described in the following sections.

4.12.5.2.3 Numeric Data Group

In this example, the GEO.granule.terr HDF file was selected from the File Selection Dialog, bringing up the File Contents Display Pop-up shown in Figure 4.12.5-3.

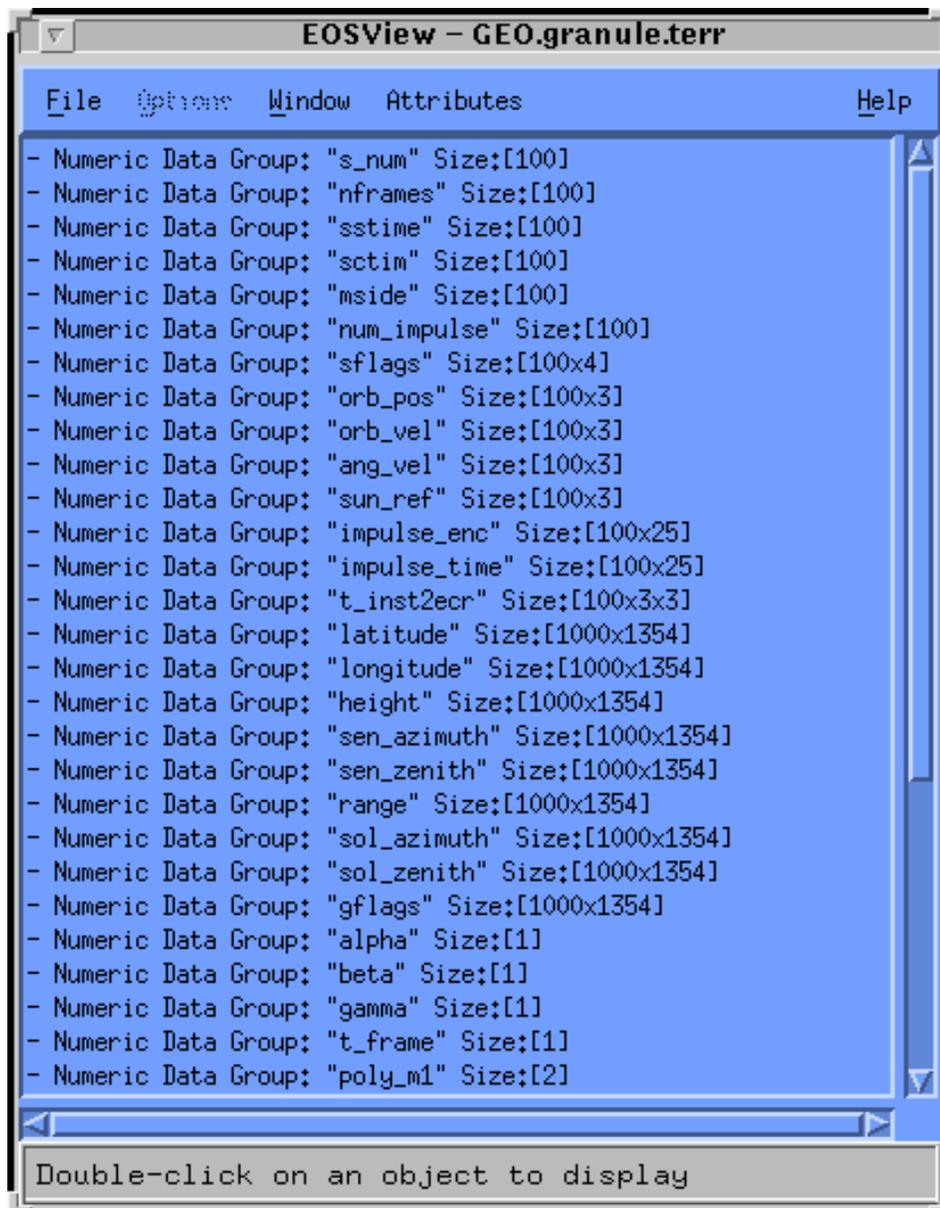


Figure 4.12.5-3. EOSView File Contents Pop-up

Double-clicking on an item from the EOSView File Contents Pop-up (in this example, Numeric Data Group: "sol_azimuth" Size: [1000X1354] was selected) brings up the Multi-Dimension SDS window as shown in Figure 4.12.5-4. This window allows the operator to select dimensions and indices for other dimensions.

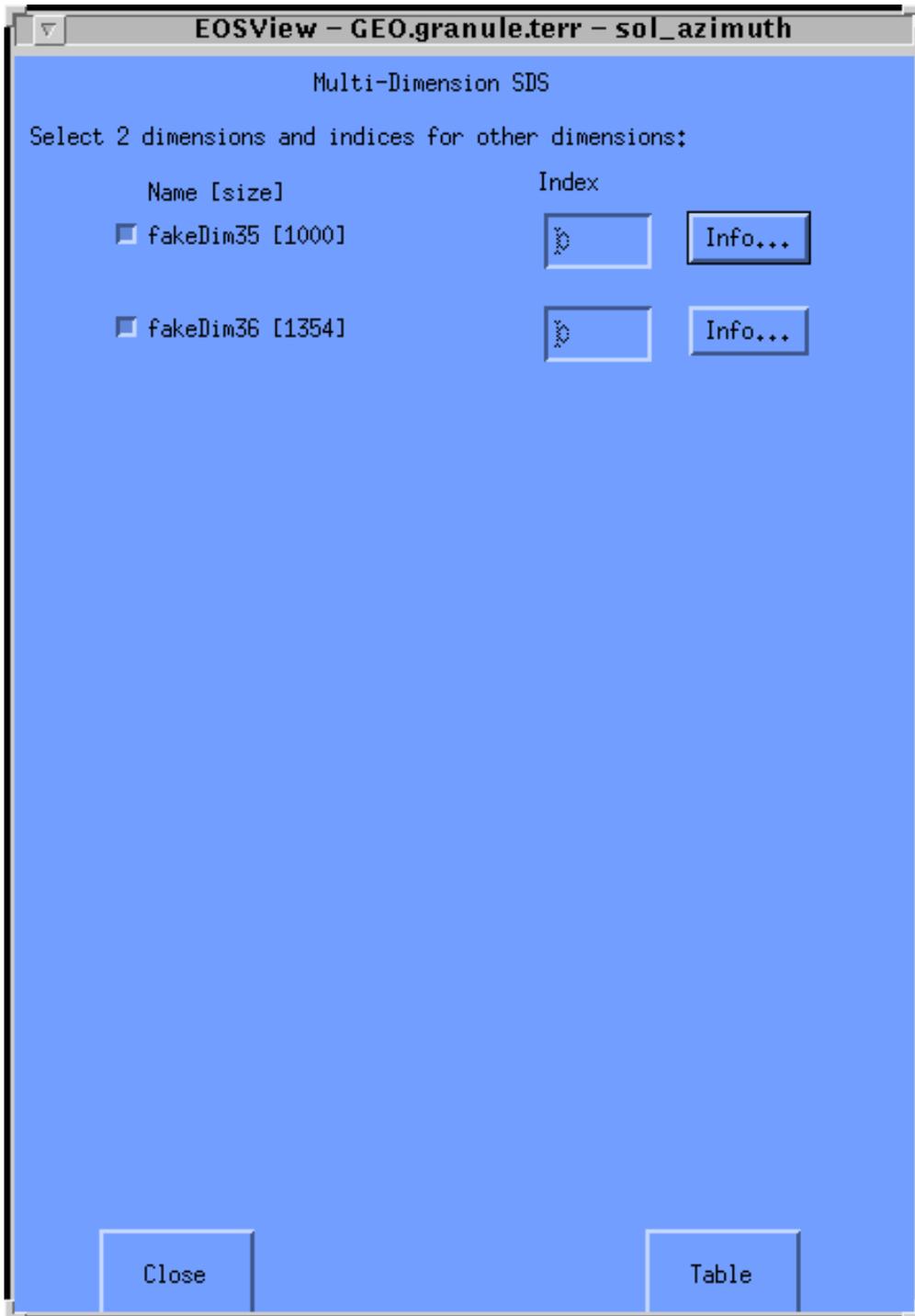


Figure 4.12.5-4. Multi-Dimension SDS Pop-up

Table 4.12.5-3 describes the fields of the Multi-Dimension SDS Pop-up.

Table 4.12.5-3. Multi Dimension SDS Field Description

Field Name	Data Type	Size	Entry	Description
Index	Integer	N/A	Required	Index of involved dimensions. For the selected dimension, the default value is 0. For the unselected dimension, the number can be as large as what is in brackets after the dimension name.
Table	Button	N/A	Optional	Clicking this button brings up a table window (see Figure 4.12.5-6) displaying a 1 or 2 dimensional list of the data as either a Scientific Data Group or Vdata.
Close	Button	N/A	Required	Closes the window.

EOSView can only display 2-dimensional (2-D) datasets. If a dataset contains more than 2-D, a 2-D slice of the dataset needs to be selected. This is accomplished by selecting ONLY 2 dimension boxes to the left of the dimension name. The other dimensions can have an index entered in the text box. Additional information for each dimension can be displayed in a separate window by pressing the button next to the dimension the information is desired. Clicking on the **Info...** button brings up a Dimension Information pop-up shown below in Figure 4.12.5-5.

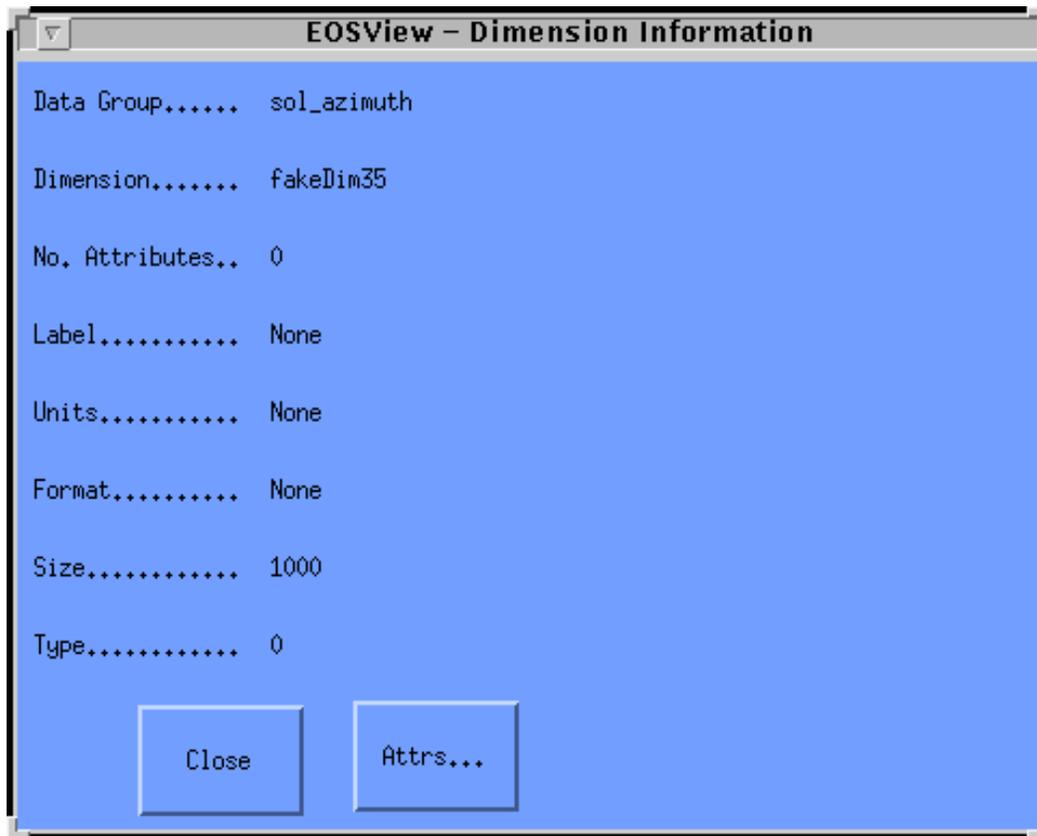


Figure 4.12.5-5. Dimension Information Pop-up

This window contains information such as number of attributes, units, format, size, etc. From this window, the operator can display textual output of the attributes for this dimension by clicking on the **Attrs...** button. Selecting **Close** closes the EOSView - Dimension Information Window.

Selecting the **Table** button from the Multi-Dimension SDS window brings up a table window as shown in Figure 4.12.5-6. The table window displays a 1 or 2 dimensional list of the data as either a Scientific Data Group or Vdata. The window is sizable and contains horizontal and vertical scrollbars.

The **File** pulldown menu contains the following items, as shown in Figure 4.12.5-6:

- **M**ake Image - This creates a pseudo-color image of the selected table. Selecting this option causes the Min/Max Values Pop-up to appear (Figure 4.12.5-14)
- **P**lot - if the table has been created from an SDS the operator has the option of converting the table to a surface or contour plot as shown in Figure 4.12.5-7
- **A**ttributes... - This displays text attributes assigned to this table. Selecting this option causes the Attributes Text Display Pop-up to appear as shown in Figure 4.12.5-34
- **S**tatistics - EOSView has basic statistical capabilities for table data. An SDS table has the minimum, maximum and average for the entire table displayed in the EOSView - Stats window (see Figure 4.12.5-12). For a table created from Vdata data, the same stats are calculated for each column of data (field of Vdata). The EOSView stats window displays the name, minimum, maximum, and average values of a table. The name corresponds to the name of the SDS or Vdata field name. The data is not editable and non-selectable. Hitting the "Ok" button closes the EOSView Stats Window
- **J**ump To... - This option allows the operator to jump to a specific row in a table. Selecting this option causes the Jump To Dialog to appear (Figure 4.12.5-12). The user can enter the desired row number. Once the OK button is pressed the desired row number appears in the first row of the table. See Section 4.12.5.2.7 for a description of the Jump To... option
- **S**ave - This option allows the operator to save the table in either ASCII or binary format. Once the operator has selected ASCII or binary from the cascading menu, the EOSView File Save Dialog is displayed (see Figure 4.12.5-13). This window is similar to the EOSView File Open Dialog. EOSView only saves tables to a new file, therefore, a unique file name must be entered in the "Save as:" text field
- **C**lose Window - Closes the table window

	0	1
	23437	23455
	23434	23451
	23431	23448
	23427	23445
	23424	23441
	23421	23438
	23417	23435
	23414	23431
8	23411	23428
9	23407	23425
10	23421	23439
11	23418	23435
12	23415	23432
13	23411	23429
14	23408	23425
15	23405	23422
16	23401	23419
17	23398	23415
18	23394	23412
19	23391	23408
20	23405	23423
21	23402	23419
22	23399	23416

Figure 4.12.5-6. EOSView “sol_azimuth” Table Pop-up

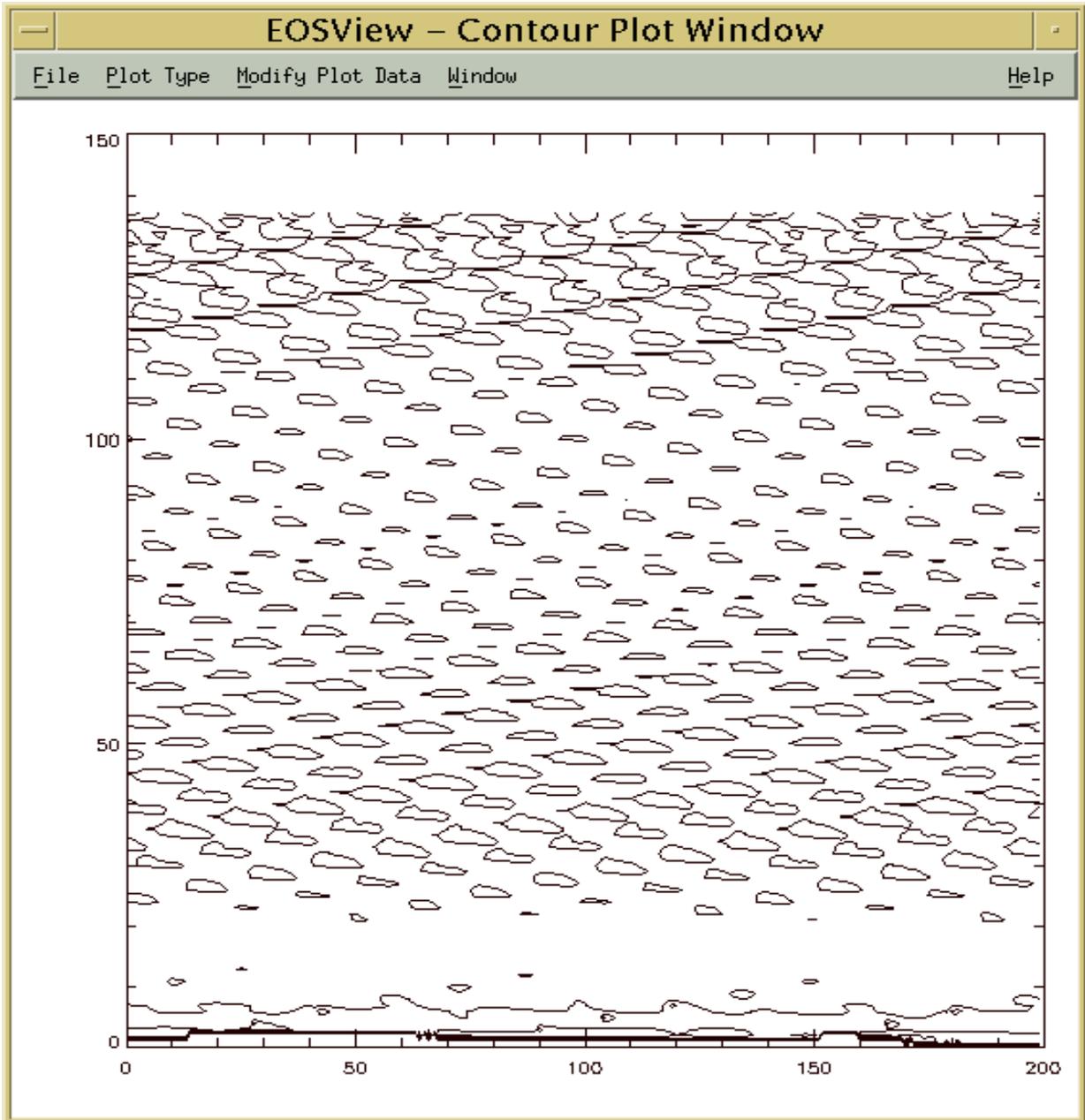


Figure 4.12.5-7. EOSView Contour Plot Pop-up

4.12.5.2.4 Surface/Contour Plot

The EOSView Contour/Surface Display displays a surface or contour plot of the selected Numeric Data Group. The window contains a menubar and can be resized.

- The **F**ile menubar option contains only the **C**lose option. Selecting it closes the surface/contour plot window

- The **Plot Type** menubar option acts as a toggle between the surface and contour plots. If the current plot being displayed is a contour plot then the option listed is **Surface Plot**. If the current plot being displayed is a surface plot then the option listed is **Contour Plot**. Selecting this option causes a new window to appear with the selected plot
- The **Modify Plot Data** menubar option allows the user to modify the plots based on three criteria. The user can modify a plot by excluding a range of data, excluding up to three individual values, or plotting between a minimum and maximum value
- The **Window** option lists, in a pull-down menu, all windows, which are currently open. See Section 4.12.5.2.21 “Window Pulldown Menus”
- The **Help** option provides user supporting information

The option **Select Data Range to Exclude from Plot:** Listed under the **Modify Plot Data** menubar option causes the Contour/Surface Data Range window to appear (Figure 4.12.5-8). The user can select a range of data to exclude from the plot by entering the minimum value to exclude in the Minimum Value text field and the maximum value to exclude in the Maximum Value text field. The user can select the number of contour levels desired by entering the number in the Contour Levels text field. Entering data in the Contour Levels text field is optional. The Contour Levels text fields only appear in the Data Range Pop-up if the plot was a contour plot. Pressing the **Continue** button causes a new plot to be drawn without the data range entered. Pressing the **Cancel** button closes the window with no further action.

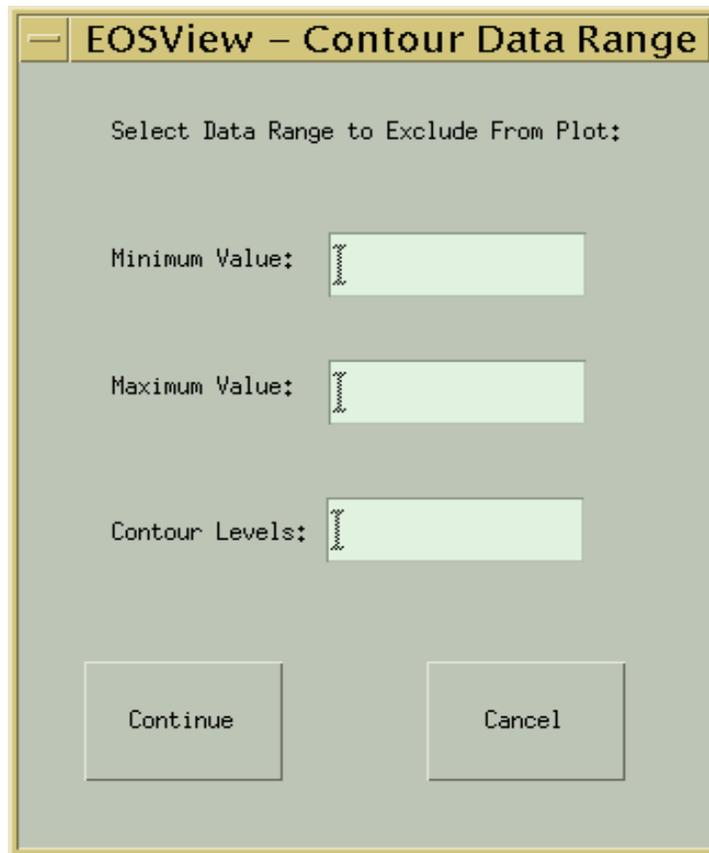


Figure 4.12.5-8. Contour/Surface Data Range Pop-up

The option **Select Data Value to Exclude from Plot:** listed under the **Modify Plot Data** menubar option causes the Contour/Surface Data Value window to appear (Figure 4.12.5-9). The user can enter up to three values that are not plotted. The first value should be entered in the Data Value 1 text field, the second value should be entered in the Data Value 2 text field, and the third value should be entered in the Data Value 3 text field. The user can select the number of contour levels desired by entering the number in the Contour Levels text field. Entering data in the Contour Levels text field is optional. The Contour Levels text fields only appear in the Data Range Pop-up if the plot was a contour plot. Pressing the **Continue** button causes a new plot to be drawn without the selected data values. Pressing the **Cancel** button closes the window with no further action.

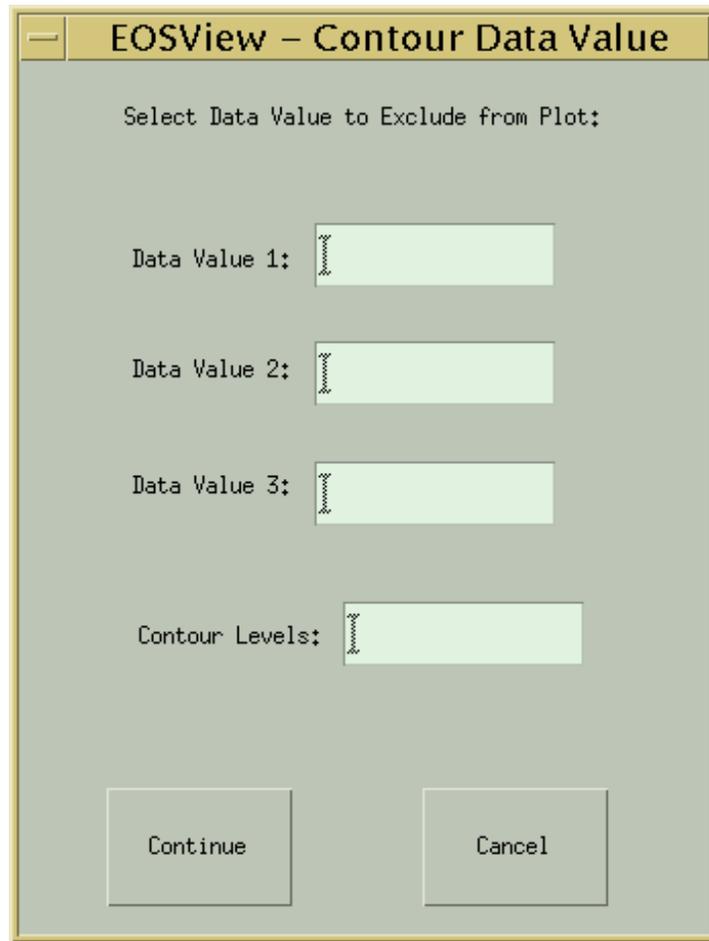


Figure 4.12.5-9. Contour/Surface Data Value Pop-up

The option **Select Minimum and Maximum Range to Plot:** listed under the **Modify Plot Data** menubar option causes the Contour/Surface Min/Max Range window to appear (Figure 4.12.5-10). The user can enter a range of values desired to be plotted. All values less than the minimum value and greater than the maximum value are not plotted. The minimum value to be plotted can be entered in the Minimum Value text field. The maximum value to be plotted can be entered in

the Maximum Value text field. The user can select the number of contour levels desired by entering the number in the Contour Levels text field. Entering data in the Contour Levels text field is optional. The Contour Levels text fields only appear in the Data Range Pop-up if the plot was a contour plot. Pressing the **Continue** button causes a new plot to be drawn using the data range entered. Pressing the **Cancel** button closes the window with no further action.

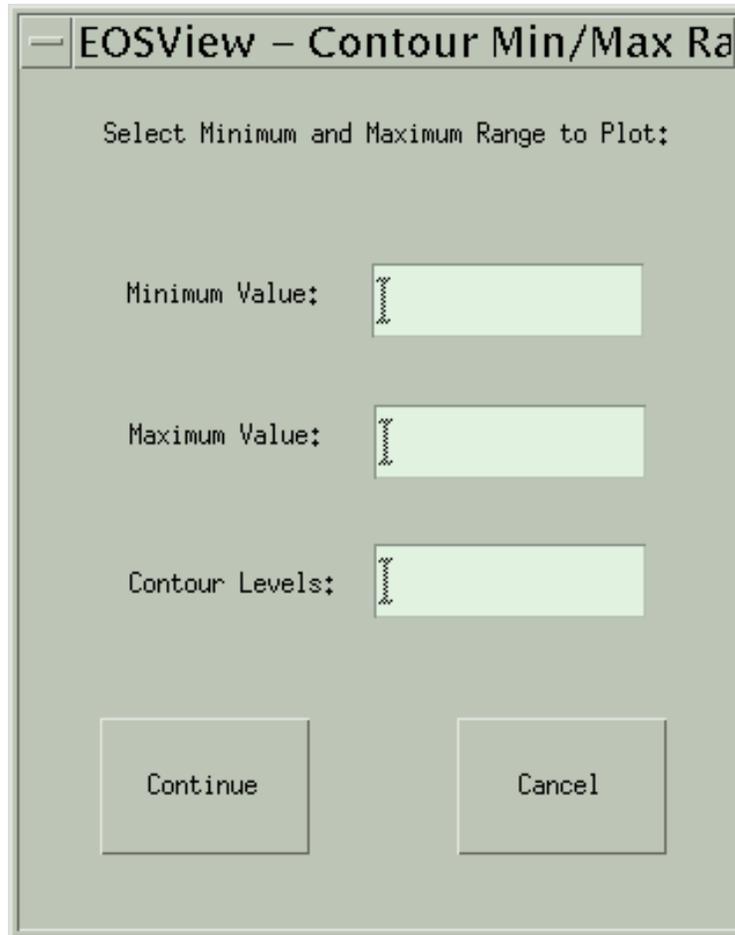


Figure 4.12.5-10. Contour/Surface Min/Max Range Pop-up

The EOSView Statistics Pop-up window (Figure 4.12.5-11) can be brought up as a selected option from the file menu list. The EOSView Statistics Pop-up window lists the minimum value, maximum value and average value in a table. The data in the table window is raw data. For a table created from an SDS, the values are taken from the entire table. For a table from a Vdata, the values are taken from each column. No statistics are calculated for character data. To close this window press the **OK** button.



Figure 4.12.5-11. EOSView Stats Pop-up

4.12.5.2.5 Jump To Dialog

The user can jump to a specific row number in a table by selecting the **Jump To...** option. Selecting this option causes the Jump To Dialog (Figure 4.12.5-12) to appear. This dialog accepts integer input in the range listed in the text field preceded with "Enter row number..." Pressing the "OK" button causes the table to jump to the selected row number. Pressing the "Cancel" button closes the Jump To Dialog, without performing a save.

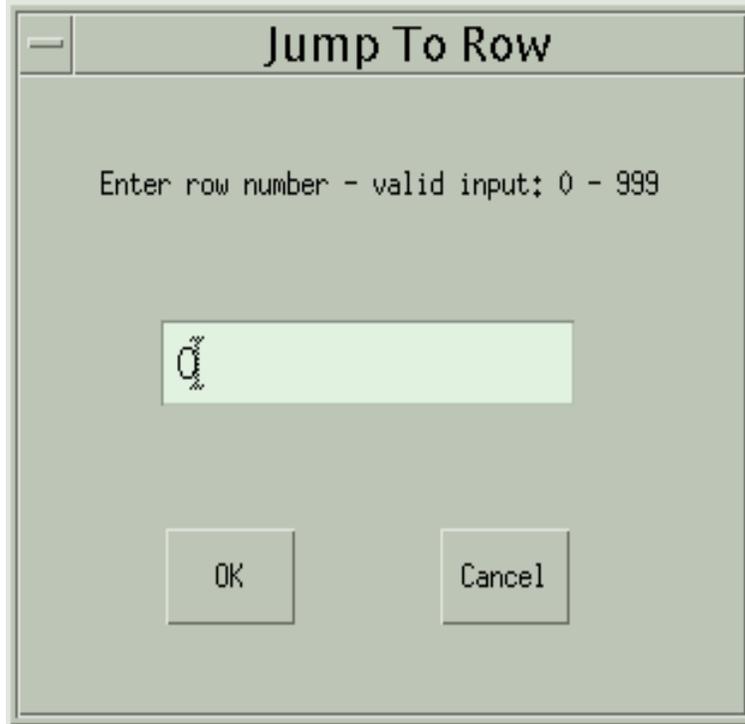


Figure 4.12.5-12. Jump To Dialog

4.12.5.2.6 Save Dialog

The user can save a table in EOSView in one of two ways. The table can be saved in either an ASCII format or it can be saved as a binary file. Selecting the save option causes the Save Dialog to appear as shown in Figure 4.12.5-13. The user can then enter the file name desired to save the table into. EOSView only saves the table to a new file. The EOSView table save mechanism saves to the HDF ASCII Interchange Format (HAIF).

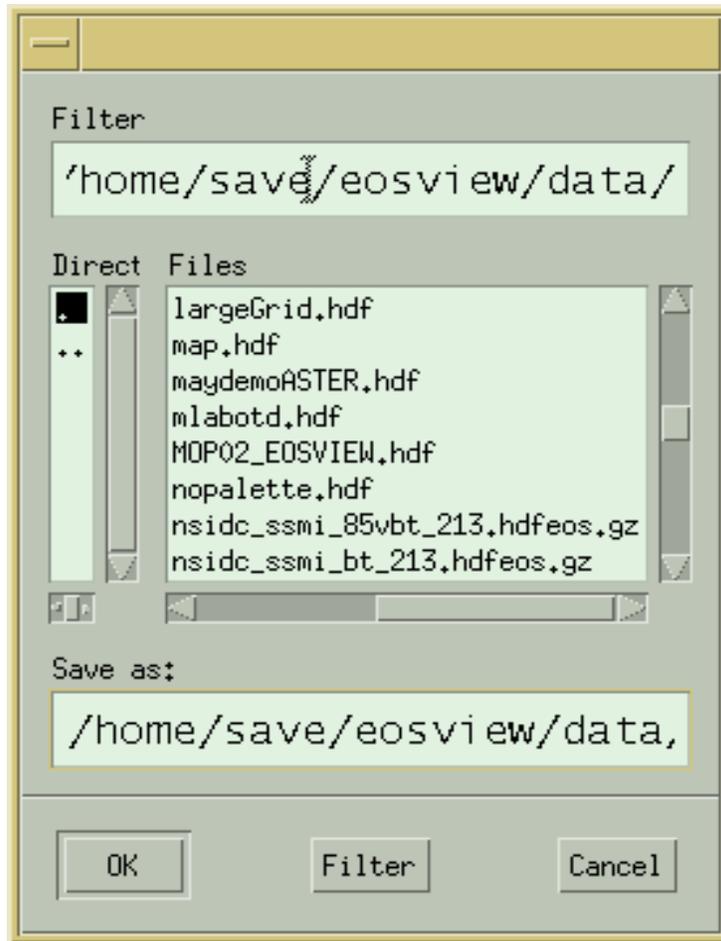


Figure 4.12.5-13. File Save Dialog

Table 4.12.5-4 describes the File Save fields.

Table 4.12.5-4. EOSView File Save Field Description

Field Name	Data Type	Size	Entry	Description
Filter	System generated (can be edited)	Unlimited	Required	Displays file selection parameters to filter the directories.
Direct	Selection	Unlimited	Required	Displays a list of directories.
Files	Selection	Unlimited	Required	Displays a list of files.
Save As	System generated (can be edited)	Unlimited	Required	Displays the filename selection - user can enter to new filename in this field.

In addition, the following pushbuttons are provided:

- **OK** – saves to the specified file
- **Filter** – filters through the directories in layers until the desired directory is displayed
- **Cancel** – closes the file save dialog

4.12.5.2.7 Make Image From Table Data

A pseudo-color image can be built from the data displayed in the Table. The image can be created by selecting **File->Make Image** from the menu bar of the EOSView - Table Pop-up (see Figure 4.12.5-4). Selecting this option causes the Min/Max Values window to appear as shown in Figure 4.12.5-14. Table 4.12.5-5 describes the fields of the Min/Max Values Pop-up.

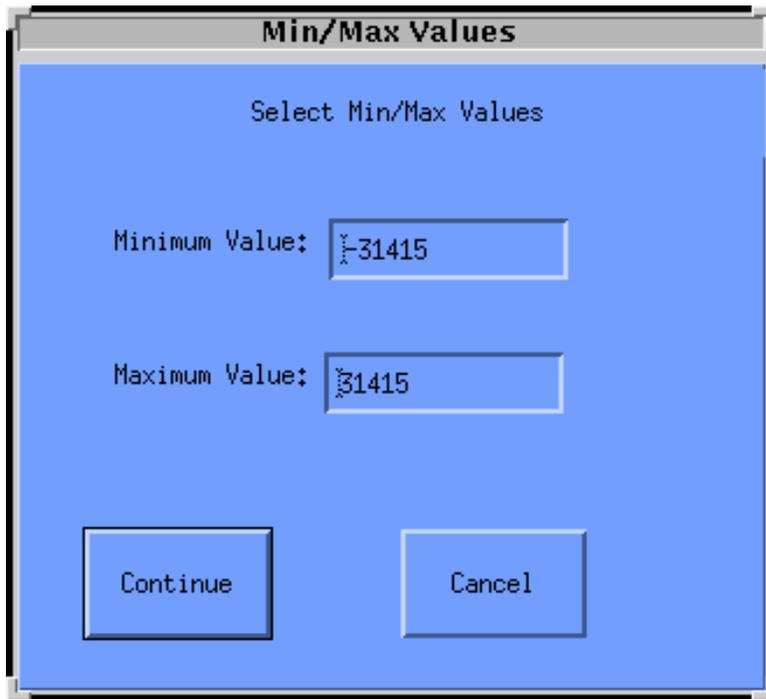


Figure 4.12.5-14. Min/Max Values Pop-up

Table 4.12.5-5. Min/Max Values Window Field Description

Field Name	Data Type	Size	Entry	Description
Minimum Value	Integer or float (depending upon original data values)	N/A	Required	Min value used for the image (field size is limited by the values that first appear when the window opens).
Maximum Value	Integer or float (depending upon original data values)	N/A	Required	Max value used for the image (field size is limited by the values that first appear when the window opens).

From the Min/Max Values Window, the operator has the opportunity to enter the minimum and maximum values used for the image. Pressing the **Continue** button causes the EOSView - Image Display Pop-up to appear (shown in Figure 4.12.5-15). The operator can cancel all actions by pressing the **Cancel** button.



Figure 4.12.5-15. "sol_azimuth" Image Display Pop-up

4.12.5.2.8 Image Display

The Image Display pop-up has the following pulldown menu options: **File**, **Palette**, **Zooming**, **Cursor**, **Window**, and **Help**.

- The **File->Overlay** option on the menubar is active only if the image has been created from a grid table. The **Overlay** option allows the operator to have lat/lon lines drawn over the image or the operator can have an icon displayed at a point on the grid image. See Section 4.12.5.2.11 which describes the EOSView lat/lon window for symbols and cursor positioning. Selecting the Close option exits the Image Display Window
- The **Palette** pulldown menu allows the operator to select colors from the following types of palettes for comparison: Default, Greyscale, Antarctica, Rainbow, and World Colors. The first palette option is "Default" which is the palette provided within the HDF file of the image being displayed; if no palette was provided, the default color map is used. The second palette option is "Grayscale" which is a black and white version of the image being displayed. The next three options are "Antarctica", "Rainbow" and "World Colors." These three palettes are provided as part of EOSView. Selecting one of these three palettes causes the current image to use that palette. The "Use Entire Palette" option is not functional
- The **Zooming** pulldown menu allows the operator to select from two zoom methods: Bilinear Interpolation and Nearest Neighbor. Bilinear Interpolation uses interpolation to calculate the probable color during an expansion/compression event; it gives a much smoother image during zooming. The second is Nearest Neighbor which uses sub-sampling or super sampling to determine probable color, e.g., two red pixels are now four red pixels during expansion
- The **Cursor** pulldown menu allows the operator to set the cursor at a specified position. The first is "X-Y Position". The operator is prompted for an X-Y location and the cursor is positioned at that location. In EOSView, position 0,0 is the lower left corner (see Section 4.12.5.2.12, which describes the EOSView - X-Y Cursor window). If the image has been created from a grid table, the operator can enter a lat/lon position and the cursor is positioned to that location. See Section 4.12.5.2.11 which describes the "EOSView - lat/lon window (used for symbols and cursor positioning). If the image has been created from a swath table, the operator can position the cursor at the selected scan line. The cursor is placed at the beginning of the scanline. See Section 4.12.5.2.13 which describes the EOSView Scanline Cursor Window
- The **Window** option lists in a pull-down menu all windows which are currently open. See Section 4.12.5.2.21 "Window Pulldown Menu"
- **Help** – see Section 4.12.5.2.23 "Help Pulldown Menu"

The Image Display also has the following pushbuttons: Zoom In and Zoom Out. It also has a panning feature as described below.

- **Zoom In** and **Zoom Out** pushbuttons -- pressing the Zoom In button causes the image to be zoomed in and re-drawn in the image window. Pressing the Zoom Out button causes the image to be zoomed out until it returns to original size. The zoom factor is displayed in the bottom left corner of the EOSView - Image Display Window on the status bar

- **Pan Window** -- If the operator has zoomed in on an image, the operator can pan around the image by holding down the left mouse button while the cursor is in the postage stamp size image and moving it around. The cursor is outlined by a box which indicates the portion of the image being displayed in the full size image window

The Image Display Pop-up also has cursor tracking capabilities. Placing the cursor on the image and holding the left mouse button causes the cursor position (in x-y coordinates) to be displayed on the right side of the status bar. If the image has been created from a grid table the cursor position is displayed in lat/lon coordinates on the right side of the status bar.

4.12.5.2.9 Lat/Lon Symbol Pop-up

The EOSView Lat/Lon Symbol/Cursor pop-up (Figure 4.12.5-16) allows the operator to enter the desired coordinate pair in one of two ways. Degrees-Minutes-Seconds (DMS radio button) allows the operator to type in the Degrees (Deg), Minutes (Min), and Seconds (Sec) for the latitude and the longitude. The second method is by entering degrees (DEG radio button) in the degrees text fields. In either case the operator can switch between North (N), South (S), and East (E), West (W) by using the list buttons to the right of the text entry fields. For both entry methods, hitting the “Ok” button causes the cursor to be positioned or a symbol drawn at the desired location. Hitting the “Cancel” button cancels the operation.

Figure 4.12.5-16. Lat/Lon Symbol Pop-up

Table 4.12.5-6 describes the parameters in the Lat/Lon Symbol Window.

Table 4.12.5-6. Lat/Lon Symbol Window Field Description

Field Name	Data Type	Size	Entry	Description
Lat (DMS)	Float	N/A	Required	Latitude (if DEG is selected).
Lon (DMS)	Float	N/A	Required	Longitude (if DEG is selected).
Lat/Lon (Deg)	Float	N/A	Required	Degrees of Latitude/Longitude (if DMS or DEG is selected).
Lat/Lon(Min)	Float	N/A	Required	Minutes of Latitude/Longitude (if DMS is selected).
Lat/Lon(Sec)	Float	N/A	Required	Seconds of Latitude/Longitude (if DMS is selected).

4.12.5.2.10 X-Y Cursor Window

Upon selection of **Cursor->Location->x-y position** in the image display window, the XY Cursor window appears as shown in Figure 4.12.5-17. The operator can enter the X-Y coordinates to have the cursor positioned by using the EOSView X-Y Cursor Pop-up. The operator can enter the desired X-Y location in the corresponding X-Y text field. The X-Y limits are placed to the right of the text fields. Hitting the “Ok” button causes the cursor to be placed at the desired location in the image. Hitting the “Cancel” button cancels the operation.

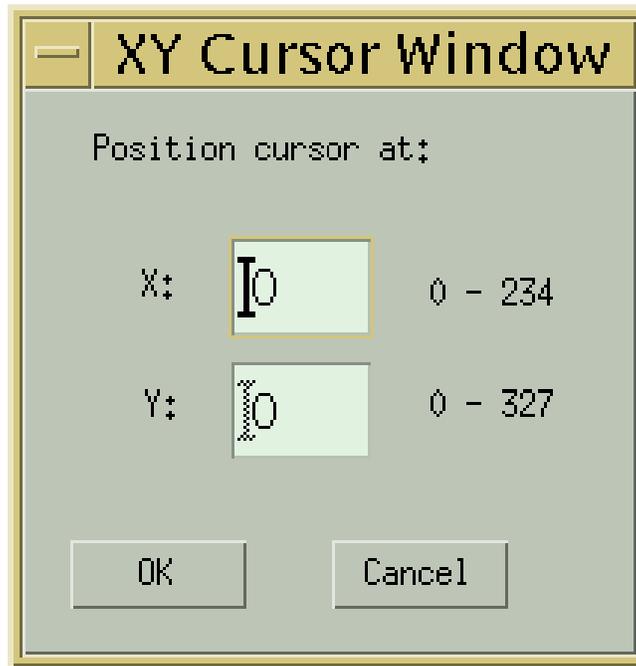


Figure 4.12.5-17. X-Y Cursor Pop-up

Table 4.12.5-7 describes the parameters in the X-Y Cursor Pop-up.

Table 4.12.5-7. X-Y Cursor Window Field Description

Field Name	Data Type	Size	Entry	Description
X:	Integer	N/A	Required	X horizontal coordinate (minimum and maximum accepted values are listed to the right of the text field).
Y:	Integer	N/A	Required	Y vertical coordinate (minimum and maximum accepted values are listed to the right of the text field).

4.12.5.2.11 ScanLine Cursor Window

If the image was created from a Swath table the operator can position the cursor to the beginning of the scanline by using the EOSView - ScanLine Cursor Pop-up (Figure 4.12.5-18). Moving the slider left and right causes the scanline value below the slider to decrease and increase, respectively. Once the desired scanline is achieved, hitting the “Ok” button causes the cursor to be placed at the beginning of the scanline. Hitting the “Cancel” button cancels the operation.

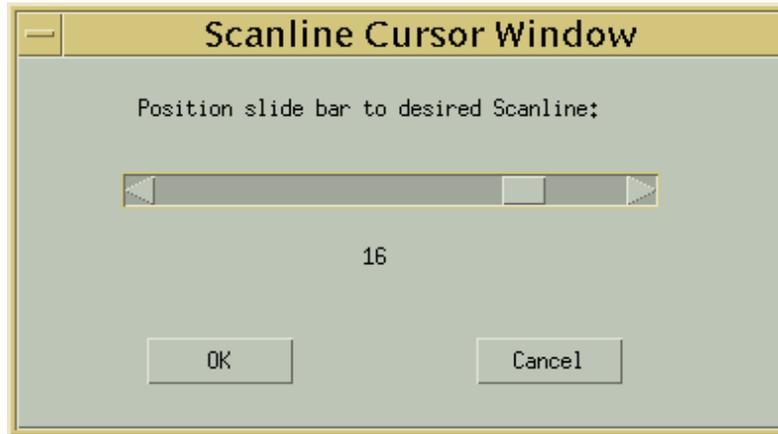


Figure 4.12.5-18. Scanline Cursor Pop-up

4.12.5.2.12 Vdata

In this example, the packVdata1.hdf file was selected from the File Selection dialog, bringing up the Vdata File Contents Pop-up (see Figure 4.12.5-19).

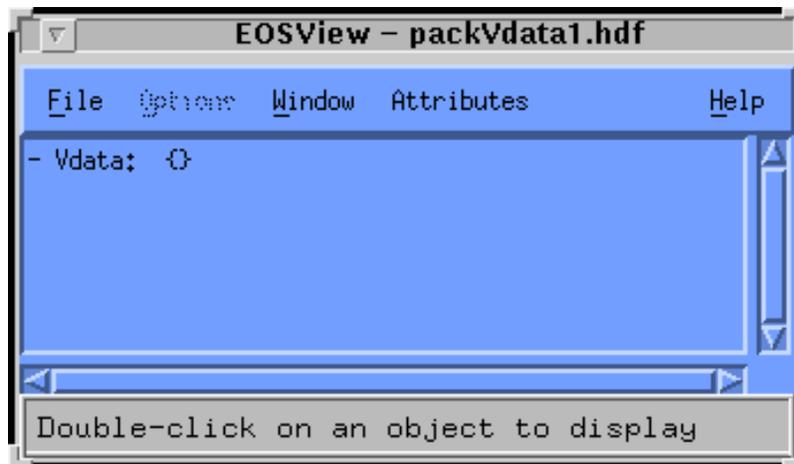


Figure 4.12.5-19. File Contents Pop-up Containing Vdata

Double-clicking on the Vdata entry brings up the “EOSView - VData Field Select” pop-up (shown in Figure 4.12.5-20). This window lists all the field names in the selected Vdata. The operator can select one or more fields for display. If the fields contain multiple values for a field then the field appears in its own table.

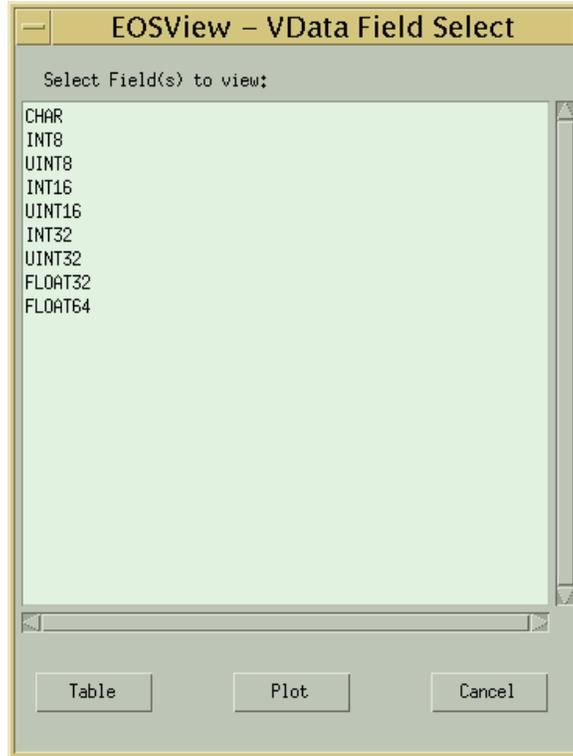


Figure 4.12.5-20. EOSView - Vdata Field Select Pop-up

Table button - Once the operator has selected the fields desired, pressing the table button causes the Vdata to appear in a table (see Figure 4.12.5-21).

File		
0	0	1
0	65	65
1	66	66
2	67	67
3	68	68
4	69	69
5	70	70
6	71	71
7	72	72
8	73	73
9	74	74
10	75	75
11	76	76
12	77	77
13	78	78
14	79	79
15	80	80
16	81	81
17	82	82
18	83	83
19	84	84
20	85	85
21	86	86
22	87	87

Figure 4.12.5-21. Table Containing Vdata Field Pop-up

Plot button - The operator can select one or two non-character data fields and have the data plotted by pressing the plot button (see Figure 4.12.5-22).

Cancel button - Cancels all actions.

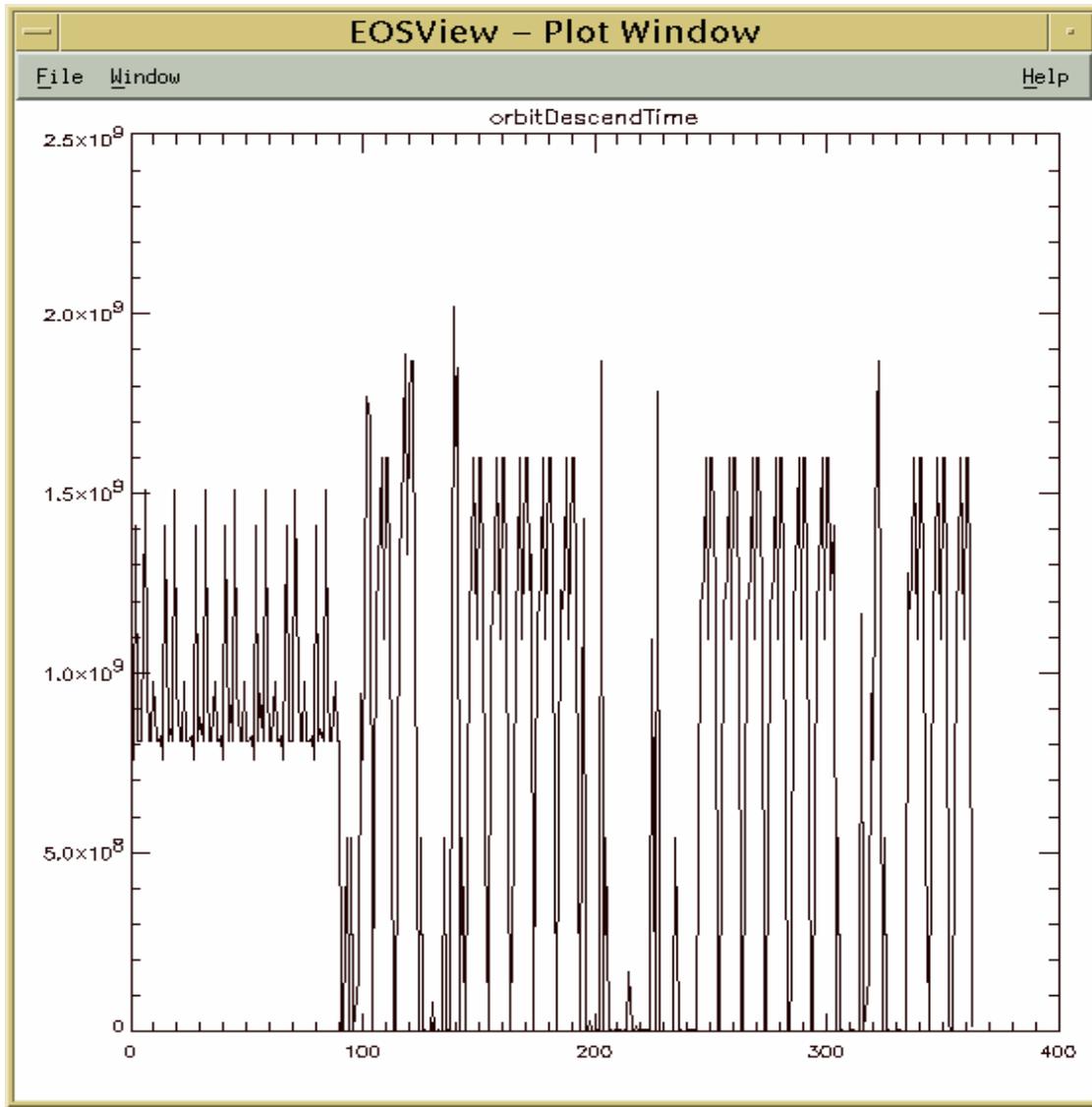


Figure 4.12.5-22. Plot Pop-up

The Plot Pop-up created from the Vdata Field Select window contains the following menu options:

- The **F**ile options allows the user to close the window by selecting **C**lose
- The **W**indow option lists in a pull-down menu all windows which are currently open. See Section 4.12.5.2.21 “Window Pulldown Menu”

4.12.5.2.13 VGroup

If the object in the File Contents Display Window is a **Vgroup**, the contents of the Vgroup are added to the list and the list is re-drawn in the list box. Clicking on a Vgroup that has already had

the contents expanded causes the contents of the Vgroup to disappear and the list is re-drawn in the list box. Figure 4.12.5-23 shows several expanded and unexpanded Vgroup categories.

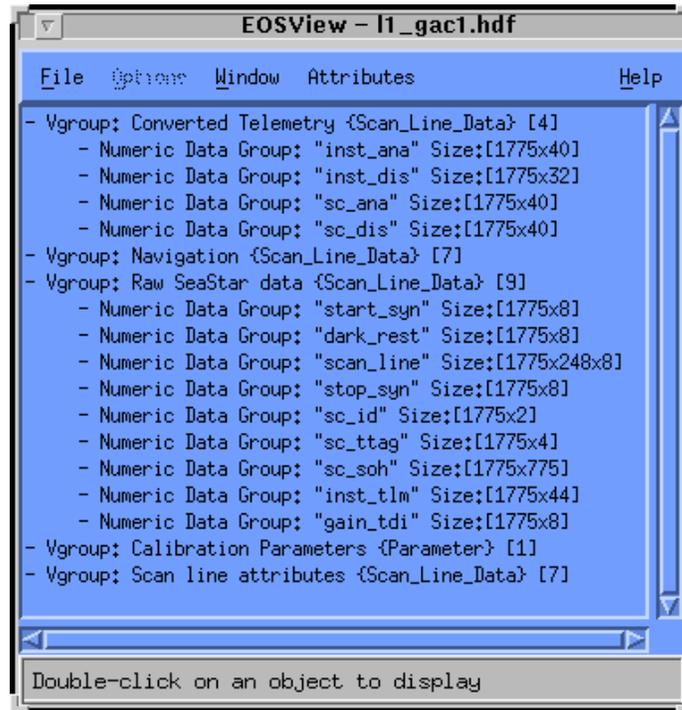


Figure 4.12.5-23. File Contents Pop-up Containing Vgroups

4.12.5.2.14 Raster Image

In this example, the alltovs.hdf file was selected from the File Selection dialog, bringing up the File Contents Display Window shown in Figure 4.12.5-24.

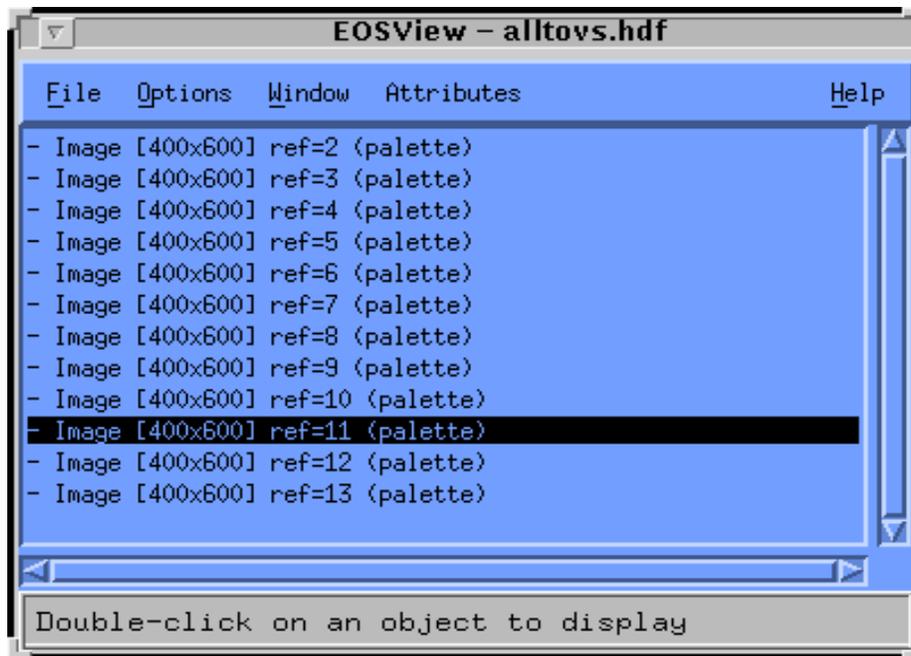


Figure 4.12.5-24. File Contents Pop-up Containing Raster Images

Clicking on a Raster Image Group causes the image to be drawn in an EOSView - Image Display Pop-up (see Figure 4.12.5-25).

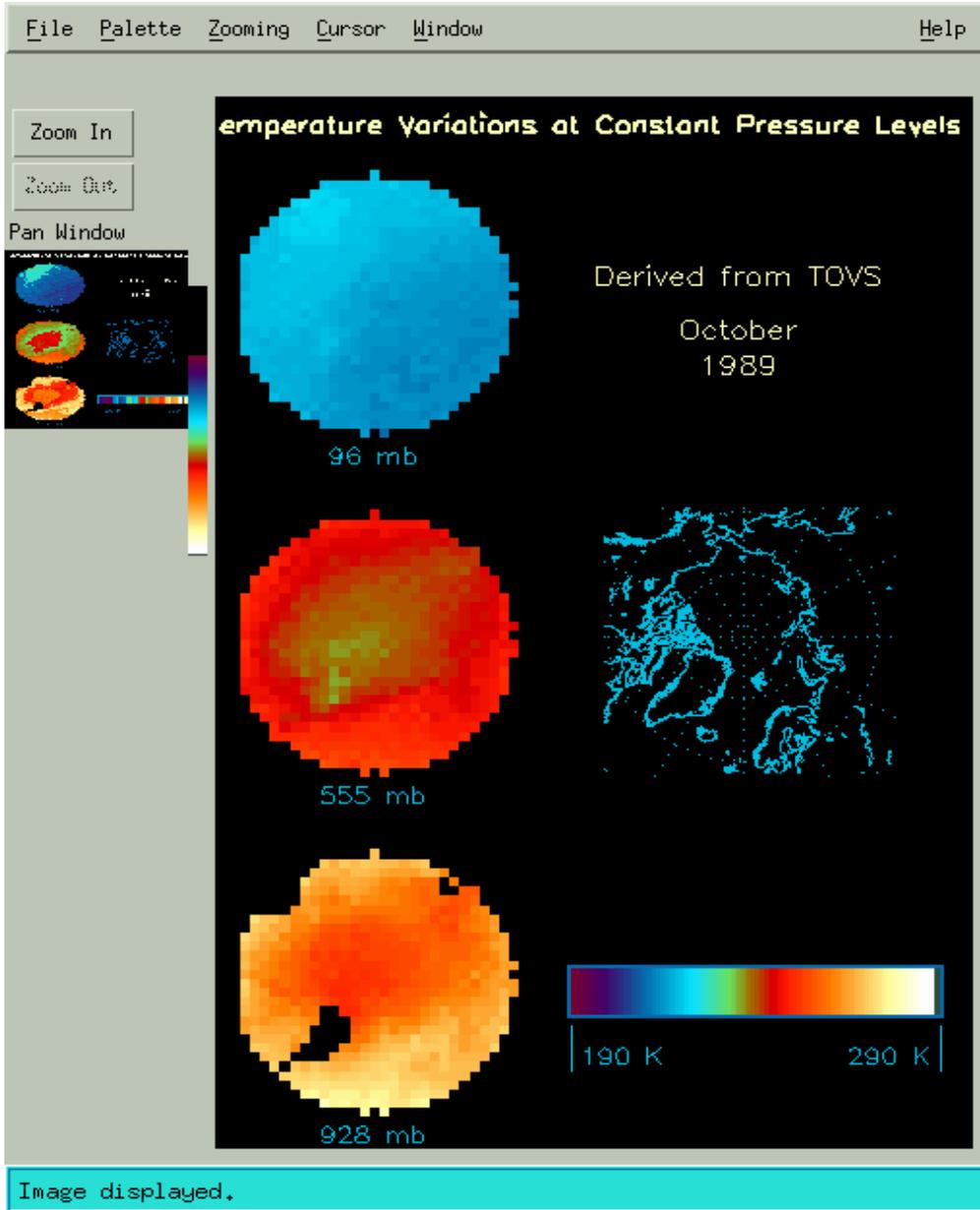


Figure 4.12.5-25. Raster Image Pop-up

A Raster image is different than the pseudo-color image shown in Section 4.12.5.2.9 since this image is not drawn from data. It is simply a visual depiction of an object. The menus and pushbuttons for this window are the same as those described for the pseudo-color display. See Section 4.12.5.2.8 for a description of the Image Display Window.

4.12.5.2.15 EOSView Grid Select GUI

In this example, the GridFile.hdf was selected from the File Selection dialog, bringing up the GridFile.hdf File Contents Display shown in Figure 4.12.5-26.

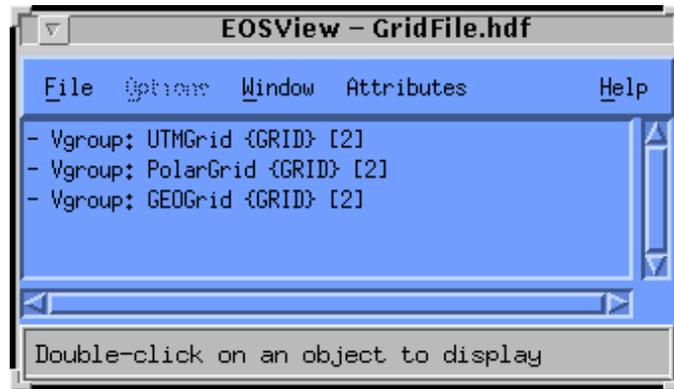


Figure 4.12.5-26. Grid File Contents Display Pop-up

Double-clicking on a selection (in this case, the object *Vgroup: UTMGrid {GRID} [2]* was selected) brings up the Grid Select Pop-up shown in Figure 4.12.5-27.

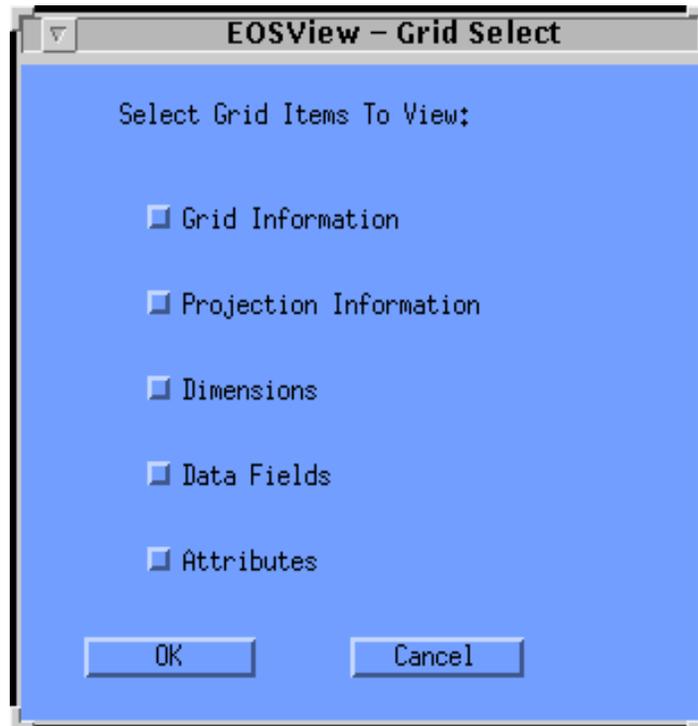


Figure 4.12.5-27. Grid Select Pop-up

All of the following options are available for selection: Grid Information, Projection Information, Dimensions, Data Fields, and Attributes. Selecting **OK** brings up windows for all the items selected. Clicking on **Cancel** returns the operator to the File Contents Window. Assuming all the items have been selected, the following windows appear:

Grid Information

To view a summary of a selected Grid object, click on the Grid Information checkbox. The Grid Information dialog pop-up (shown in Figure 4.12.5-28) displays information about the selected grid such as X-Dimension value, Y-Dimension value, Upper Left Point values, and Lower Right Point values.



Figure 4.12.5-28. Grid Information Pop-up

This window can be closed by pressing the **OK** button.

Projection Information

To view the Projection Information of the selected Grid object, click on the Projection Information checkbox in the EOSView - Grid Select window and press the **OK** button. This causes the EOSView - Grid Projection Information pop-up shown in Figure 4.12.5-29 to appear.



Figure 4.12.5-29. Projection Information Pop-up

The **Projection Information** pop-up displays information about the projection of the selected grid in a dialog box. The first item displayed is the Projection itself. If the projection is Universal Transverse Mercator, the next item is displayed in the Zone Code. For any other projection the

next items displayed are the thirteen (13) Projection Parameters. This window can be closed by pressing the **OK** button.

Dimensions

To view the dimensions of the selected Grid object, click on the Dimensions checkbox in the EOSView - Grid Select pop-up and press the **OK** button. This causes the EOSView - Grid Dimensions window (shown in Figure 4.12.5-30) to appear.

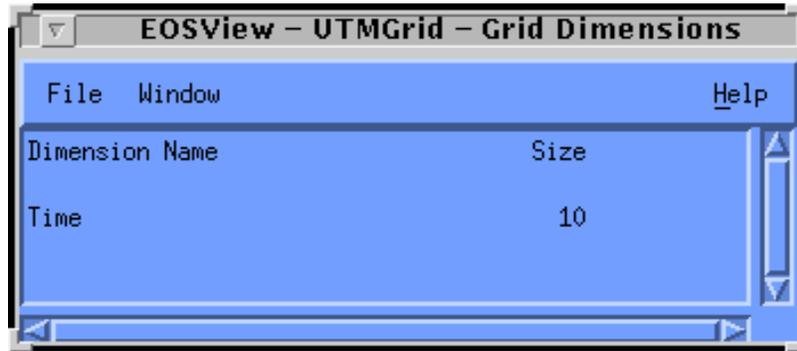


Figure 4.12.5-30. Grid Dimensions Pop-up

This window lists Dimension Names and Sizes for the selected Grid in table form in a scrollable window. The items listed are non-selectable and are for display/verification purposes only. See Section 4.12.5.2.24 for a description of saving the contents of the window to an ASCII file.

Data Fields

To view the Data Fields of the selected Grid object simply click on the Data Fields checkbox in the EOSView - Grid Select pop-up and press the **OK** button. This causes the EOSView - Grid Data Fields window (shown in Figure 4.12.5-31) to appear. See Section 4.12.5.2.24 for a description of saving the contents of the window to an ASCII file.

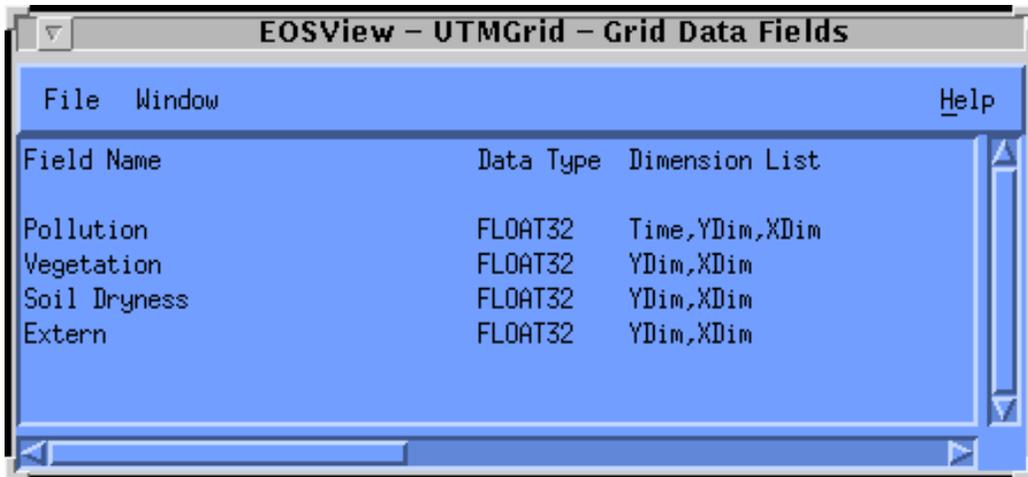


Figure 4.12.5-31. Grid Data Fields Pop-up

To view a slice of the Grid Geolocation/Data Field data, move the pointer over the object and double click the left mouse button. This causes the EOSView - Start/Stride/Edge pop-up (shown in Figure 4.12.5-32) to appear.

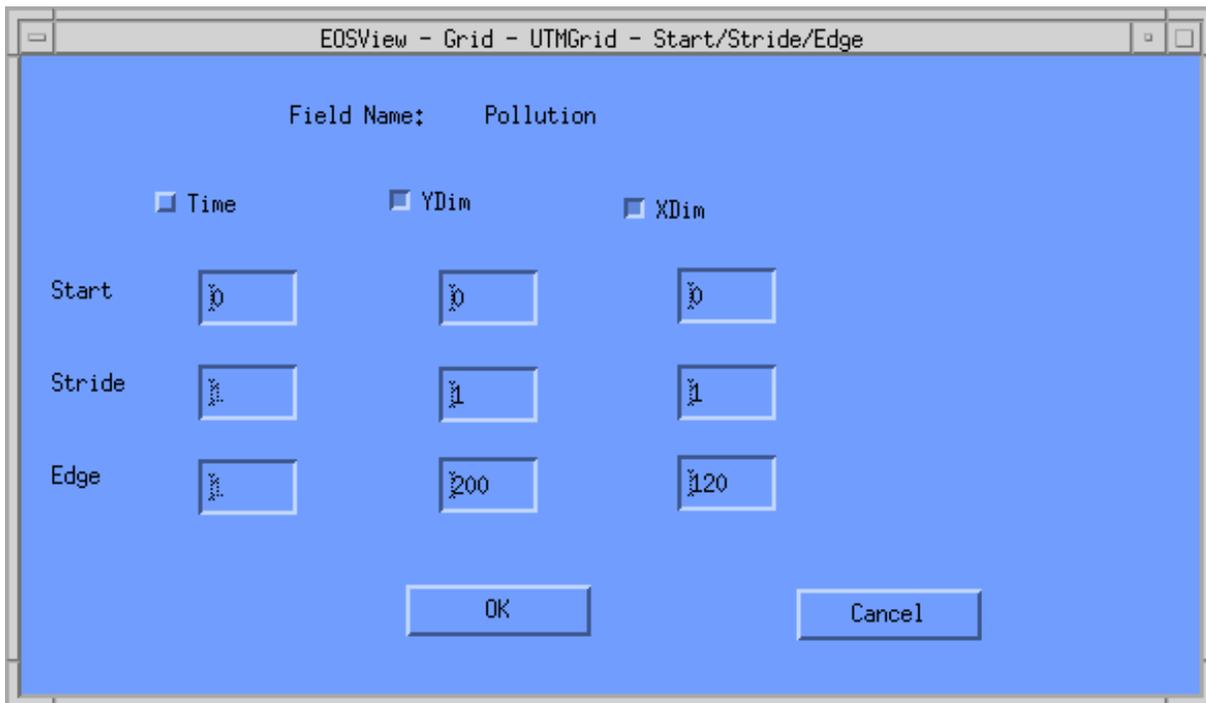


Figure 4.12.5-32. Start/Stride/Edge Pop-up

Table 4.12.5-8 describes the **Start/Stride/Edge** pop-up fields.

Table 4.12.5-8. Start/Stride/Edge Pop-up Field Description

Field Name	Data Type	Size	Entry	Description
Start	Integer	N/A	Required	Start for grid geolocation/data field data.
Stride	Integer	N/A	Required	Stride for grid geolocation/data field data.
Edge	Integer	N/A	Required	Edge for grid geolocation/data field data.

This pop-up displays the Start, Stride, and Edge values for each dimension (there can be up to eight). The start value for each dimension can be edited but the stride and edge values can only be edited for the selected dimensions. This is a way of subsampling the data desired. A dimension can be selected by clicking on the check box next to the dimension name. A maximum of two dimensions can be selected. Once the operator has entered the desired data the **OK** button can be pressed and the selected dimension data are displayed in the EOSView - Grid Table. For more information on a Table, building a pseudo-color image, and the Min/Max Values Pop-up, see Section 4.12.5.2.7. The operator can cancel all actions by pressing the **Cancel** button.

Note: if an input error occurs, a warning dialog (Figure 4.12.5-33) appears, displaying the dimension name in error and a size total. The operator must meet the criteria in the formula displayed in the warning dialog. Click OK to return to the Start/Stride/Edge Window to re-enter the correct values.

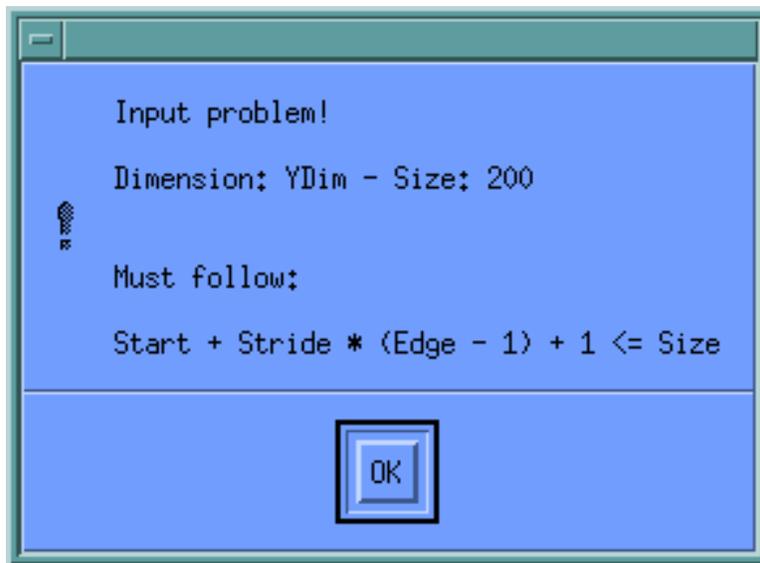


Figure 4.12.5-33. Warning Dialog

Attributes

Clicking on the Attributes checkbox in the EOSView Grid Select Pop-up brings up the Attributes Text Display shown in Figure 4.12.5-34.

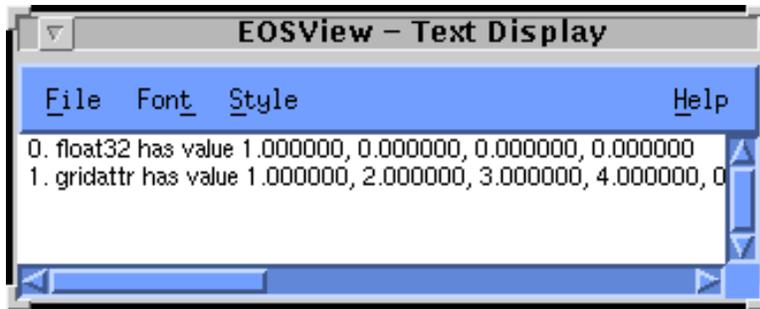


Figure 4.12.5-34. Attributes Text Display Pop-up

This display shows the attributes associated with a particular dataset. The text display can be closed from the **F**ile pulldown menu, the text can be modified using the **F**ont and **S**tyle pulldown menus, and additional help can be obtained from the **H**elp pulldown menu (see Section 4.12.5.2.23 “Help Pulldown Menu.”)

4.12.5.2.16 EOSView SwathFile Select

In this example, the SwathFile.hdf file was selected from the File Selection dialog, bringing up the File Contents Pop-up shown in Figure 4.12.5-35.



Figure 4.12.5-35. SwathFile Select Pop-up

Double clicking on an item in the File Select window brings up the Swath Select Pop-up shown in Figure 4.12.5-36.

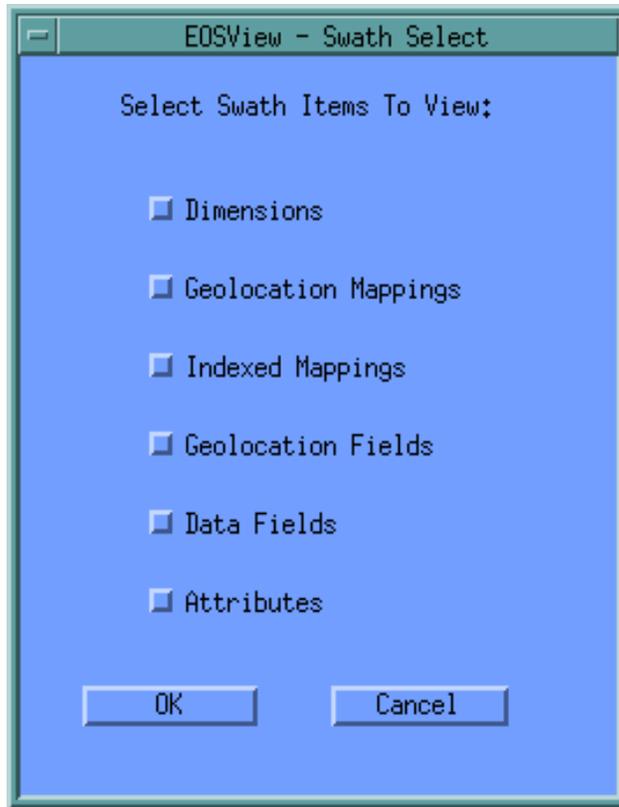


Figure 4.12.5-36. Swath Select Pop-up

As many options as desired can be selected from the following list: Dimensions, Geolocation Mappings, Indexed Mappings, Geolocation Fields, Data Fields, and Attributes. Selecting OK brings up windows for all the items selected. Clicking on Cancel closes the Swath Selection Pop-up with no action being taken. Assuming all the items have been selected, the following windows appear.

Dimensions

To view the dimensions of the selected Swath object, click on the Dimensions checkbox in the EOSView - Swath Select pop-up and press the OK button. This causes the EOSView - Swath Dimensions pop-up to appear. This window lists the Dimension Names and Sizes for the selected Swath in a table form in a scrollable window. The items listed are non-selectable and are for display/verification purposes only. This window is similar to the Grid file dimensions window described in Section 4.12.5.2.17 “EOSView Grid Select GUI” (see Dimensions).

Geolocation Mappings

To view the Geolocation Mappings of the selected Swath object, click on the Geolocation Mappings checkbox in the EOSView - Swath Select pop-up and press the OK button. This causes the EOSView - Swath Geolocation Mappings window (shown in Figure 4.12.5-37) to appear.

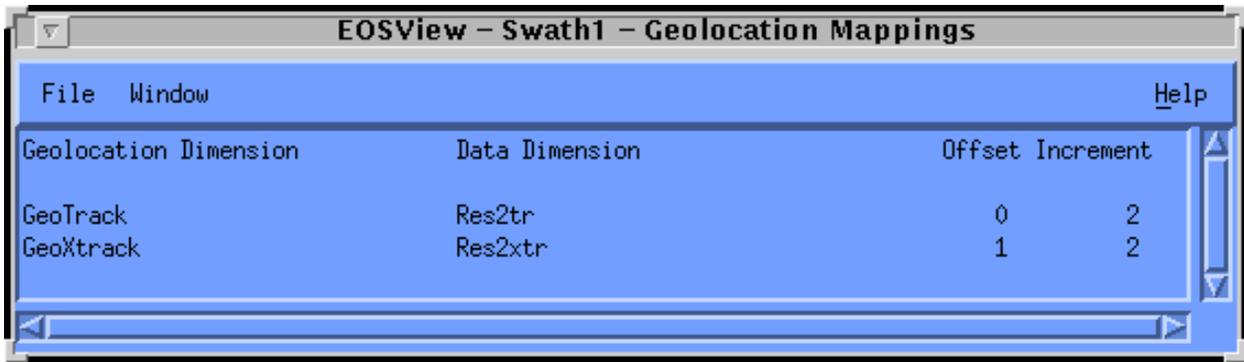


Figure 4.12.5-37. Geolocation Mappings Pop-up

This window lists the Geolocation Dimensions, Data Dimensions, Offsets, and Increments for the selected Swath in a table form in a scrollable window. The items listed are non-selectable and are for display/verification purposes only. See Section 4.12.5.2.24 for a description of saving the contents of the window to an ASCII file.

Indexed Mappings

To view the Indexed Mappings of the selected Swath object, click on the Indexed Mappings checkbox in the EOSView - Swath Select pop-up and press the OK button. This causes the EOSView - Swath Indexed Mappings pop-up (shown in Figure 4.12.5-38) to appear.

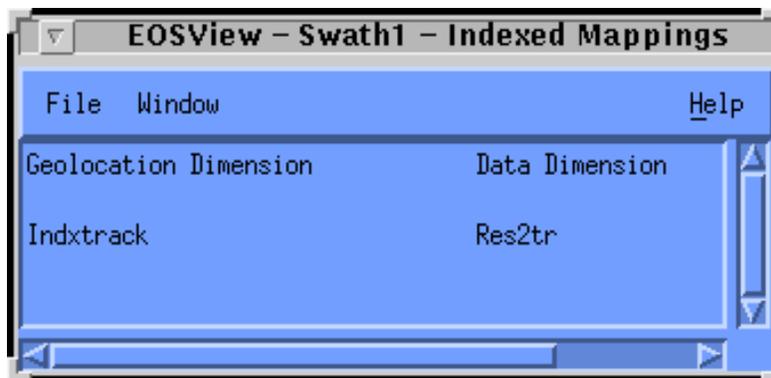


Figure 4.12.5-38. Indexed Mappings Pop-up

Viewing the size of the mapping can be performed by moving the pointer over the object and double clicking the left mouse button. This causes the EOSView - Indexed Mapping Sizes pop-up (shown in Figure 4.12.5-39) to appear. See Section 4.12.5.2.24 for a description of saving the contents of the window to an ASCII file.

Geo Index	Data Index
0	0
1	1
2	3
3	6
4	7
5	8
6	11
7	12
8	14
9	24
10	32
11	30

Figure 4.12.5-39. Index Mapping Sizes Pop-up

This window lists the Geolocation Indices and Data Indices for the selected Swath in a table form in a scrollable window. The items listed are non-selectable and are for display/verification purposes only. The window can be closed by selecting “Close” from the File menu. See Section 4.12.5.2.24 for a description of saving the contents of the window to an ASCII file.

Geolocation Fields

To view the Geolocation Fields of the selected Swath object, click on the Geolocation Fields checkbox in the EOSView - Swath Select pop-up and press the OK button. This causes the EOSView - Swath Geolocation Fields window (shown in Figure 4.12.5-40) to appear.

Field Name	Data Type	Dimension List
Time1	FLOAT32	GeoTrack
Time2	FLOAT32	GeoTrack
Time3	FLOAT32	GeoTrack
OneID	FLOAT32	Unlim
LonLat	FLOAT32	TWO, GeoTrack, GeoXtrack
Longitude	FLOAT32	GeoTrack, GeoXtrack
Latitude	FLOAT32	GeoTrack, GeoXtrack
Temp1	FLOAT32	GeoTrack, GeoXtrack
Temp2	FLOAT32	GeoTrack, GeoXtrack

Figure 4.12.5-40. Geolocation Fields Pop-up

Selecting a Swath Geolocation to view a slice of the data can be performed by moving the pointer over the object and double clicking the left mouse button. This causes the EOSView - Start/Stride/Edge pop-up to appear. This window lists the Start, Stride, and Edge values for each dimension listed. This window is similar to the Grid file Start/Stride/Edge window described in Section 4.12.5.2.17 “EOSView Grid Select GUI“ (see Data Fields). See Section 4.12.5.2.24 for a description of saving the contents of the window to an ASCII file.

Data Fields

To view the Data Fields of the selected Swath object, click on the Data Fields checkbox in the EOSView - Swath Select pop-up and press the OK button. This causes the EOSView - Swath Data Fields pop-up to appear. This window is similar to the Grid file data fields window described in Section 4.12.5.2.15 “EOSView Grid Select GUI“ (see Data Fields). See Section 4.12.5.2.24 for a description of saving the contents of the window to an ASCII file.

Attributes

To view the attributes of the selected Swath object, click on the Attributes checkbox in the EOSView - Swath Select window and press the OK button. This window is similar to the Grid file attributes pop-up described in Section 4.12.5.2.15 “EOSView Grid Select GUI “ (see Attributes).

4.12.5.2.17 Point Files

In this example, selecting PointFile.hdf from the File Select dialog brings up the File Contents pop-up shown in Figure 4.12.5-41.

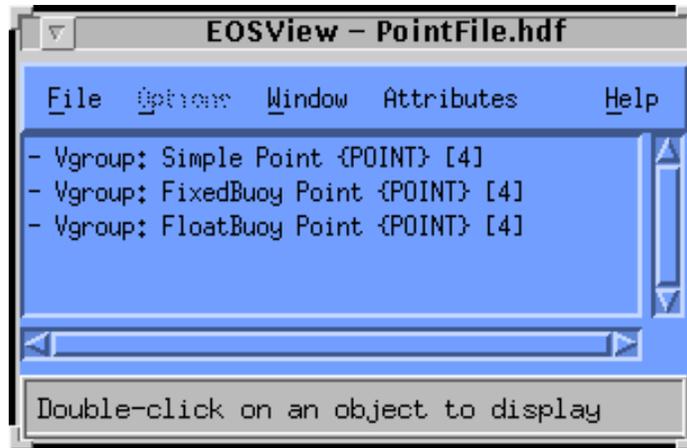


Figure 4.12.5-41. PointFile Contents Pop-up

Double-clicking on an item in the PointFile pop-up (in this example, the *Vgroup: FloatBuoy Point {POINT} [4]* object is selected) opens the Point Select Pop-up shown in Figure 4.12.5-42.

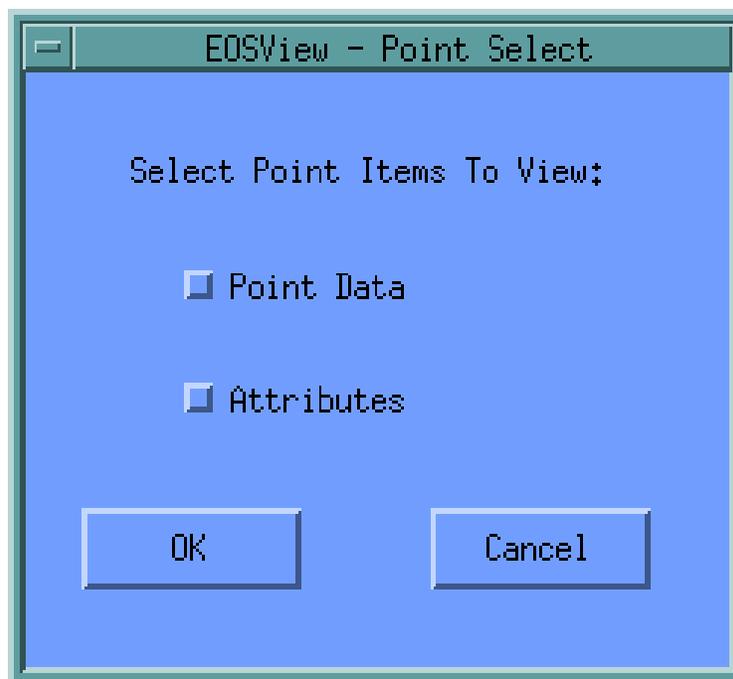


Figure 4.12.5-42. Point Select Pop-up

Either Point Data, Attributes or both options can be selected. Clicking on OK opens the corresponding windows for the options selected. Clicking on Cancel closes the Point Select

Pop-up with no action being taken. Assuming both items have been selected, the windows as described below appear.

Point Data

To view the Point Data of the selected Point object, simply click on the Point Data checkbox in the EOSView - Point Select window and press the OK button. This causes the EOSView-Point Level Info pop-up to appear as shown in Figure 4.12.5-43.

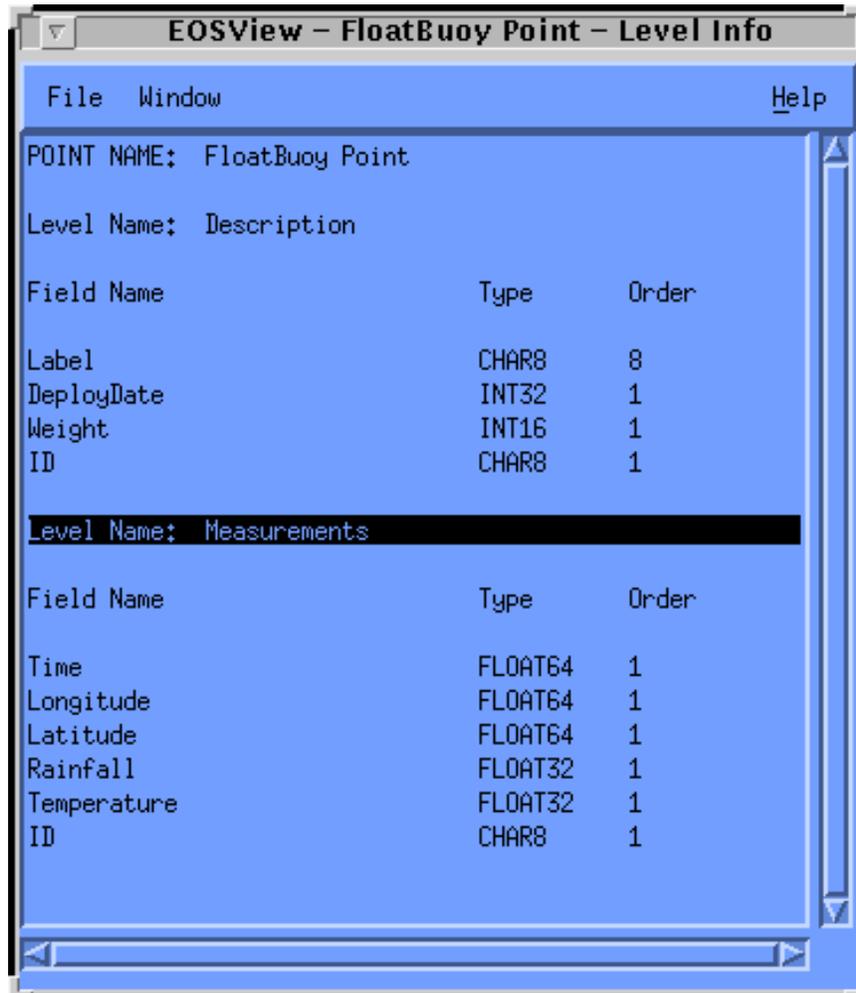


Figure 4.12.5-43. Level Info Pop-up

Double-clicking on any **Level Name** brings up the Vdata field select pop-up, shown in Figure 4.12.5-20. The operation of the Vdata field select pop-up is described in Section 4.12.5.2.12. See Section 4.12.5.2.24 for a description of saving the contents of the window to an ASCII file.

Selecting a field or multiple fields bring up the table window shown in Figure 4.12.5-44.

	0	1
0	34532000.000000	-56.795451
1	34655930.800000	-51.144523
2	34761777.400000	73.005232
3	34924857.400000	-51.289537
4	35010197.100000	-137.896588
5	35113965.300000	70.943919
6	35146430.000000	-141.334164
7	35180802.900000	-51.291848
8	35286334.700000	-141.921518
9	35359789.300000	-139.960931
10	35510873.500000	-56.995840
11	35583198.000000	73.083084
12	35741969.400000	-138.607937
13	35811504.600000	-52.535794
14	35890062.600000	71.995167
15	36015258.200000	-51.100562
16	36176650.200000	-141.603094
17	36292709.900000	-53.052534
18	36307577.300000	-53.937608
19	36384294.900000	-55.381183
20	36576747.400000	-141.588561
21	36725342.200000	-51.199441
22	36758333.400000	-138.998487

Figure 4.12.5-44. Vdata Table Pop-up

The data in this table can be saved by selecting Save from the File pulldown menu (see Section 4.12.5.2.12 for a sample of a Plot Window). The statistics of this table can be viewed by selecting Statistics from the File pulldown menu. To close this window select Close from the file pulldown menu.

Attributes

To view the attributes of the selected Point Select object, click on the Attributes checkbox in the EOSView - Point Select window and press the OK button. This window is similar to the Grid file attributes pop-up described in Section 4.12.5.2.15 “EOSView Grid Select GUI “ (see Attributes).

4.12.5.2.18 Pulldown Menus

The File Contents Displays all have a common pulldown menu structure with the following options: **File**, **Options**, **Window**, **Atttributes**, and **Help**. These are described in the following sections.

4.12.5.2.19 File Pulldown Menu

The **File** pulldown menu consists of the following options: File Info, Save, and Close. The Close pulldown menu closes the File Contents Display Pop-up and all windows derived from the window. The Save feature is described in Section 4.12.5.2.24 “Save Pulldown Menu.” The File Info pulldown menu selection allows the operator to bring up information on the number of Raster Image groups, scientific data groups, palettes, Vgroups, LoneVdata, and annotations in the form of a File Information dialog as shown in Figure 4.12.5-45.

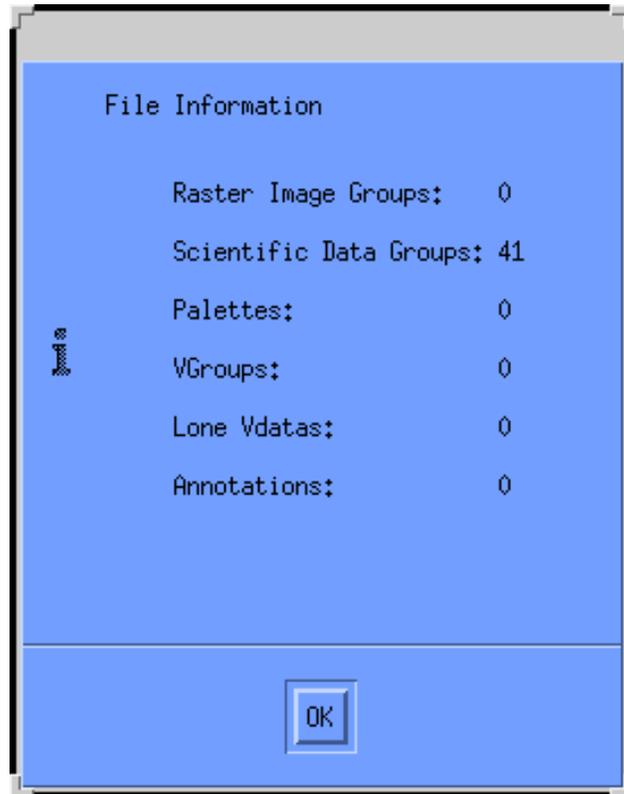


Figure 4.12.5-45. File Information Dialog

Clicking the **OK** button closes the File Information Dialog.

4.12.5.2.20 Options Pulldown Menu

The Options pulldown menu and its **Animate images** selection becomes sensitized when the selected file contains multiple Raster Image Groups. This causes all the images to be lined up and displayed in order in an EOSView - Animation Window. The Animation Window is depicted in Figure 4.12.5-46, with different frames of an actual animation shown (skull.hdf file).

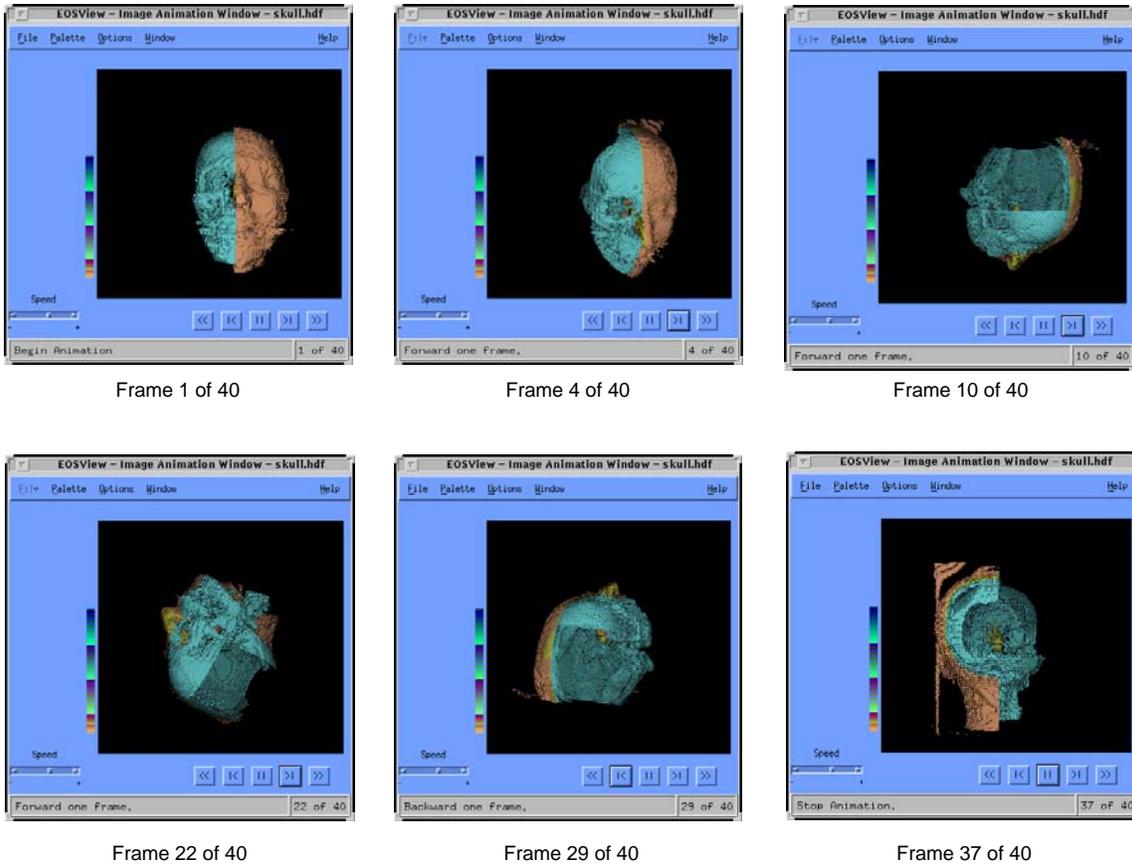


Figure 4.12.5-46. Animation Window Pop-up

The Animation Window has the following features:

- **Closing Animation Window** – The Close option on the menu bar of the animation window causes the animation window to close
- **Palette** – see Section 4.12.5.2.8 for a description of the Image Display palette
- **Modes** -- There are three modes of animation. These modes can be selected by selecting the Options - Modes options of the animation window menu bar
 - The first option "Stop at end" displays the images until the last image or first image is displayed. This is based upon what direction was selected for animation
 - The second option "Continuous run" causes the animation to go into an endless loop in the direction selected until the stop button is pressed
 - The third option "Bounce" causes the animation to run back and forth in forward and reverse order until the stop button is pressed

- **Speed Control** -- The speed control slider adjusts the speed of the animation to the desired speed. Moving the slider in the "+" direction increases the animation speed while moving the slider in the "-" direction causes the animation to decrease in speed
- **Window** – see Section 4.12.5.2.21 “Window Pulldown Menu”
- **Help** – see Section 4.12.5.2.23 “Help Pulldown Menu”
- **Start/Stop Buttons** -- There are five buttons centered underneath the animation image. The five buttons are labeled "<<" "<" "||" ">" and ">>". These buttons are known as the Start/Stop Buttons
 - The button labeled "<<" causes the animation to begin in reverse direction
 - The button labeled "<" causes the animation image to decrease by one frame
 - The button labeled "||" is the Stop button and causes the animation to stop
 - The button labeled ">" causes the animation image to increase by one frame
 - The button labeled ">>" causes the animation to begin in forward direction

The mode of operation of these buttons is controlled by selecting the Modes option on the menu bar.

4.12.5.2.21 Window Pulldown Menu

The Window pulldown menu lists all windows which are currently open. Any window selected from this list is shuffled to the top. Figure 4.12.5-47 shows the Window pulldown menu provided when the EOSView Main Window, orbital.hdf, rainbow.hdf and skull.hdf files are open.

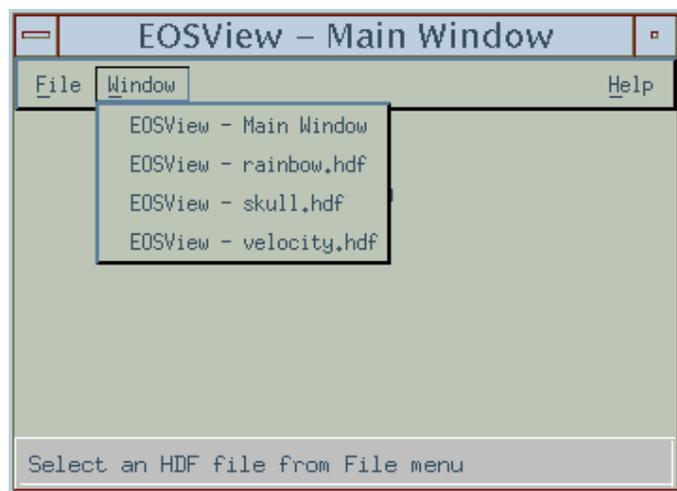


Figure 4.12.5-47. EOSView Main Screen Showing Window Pulldown Menu

The Window pulldown menu provides the same function on all other screens on which it appears.

4.12.5.2.22 Attributes Pulldown Menu

The Attributes option contains one pull-down menu item “Global...” which brings up a text file window (shown in Figure 4.12.5-48) with a list of attributes (e.g., parameters, values, version numbers) for the entire file or brings up a dialog, which states there are no attributes available.

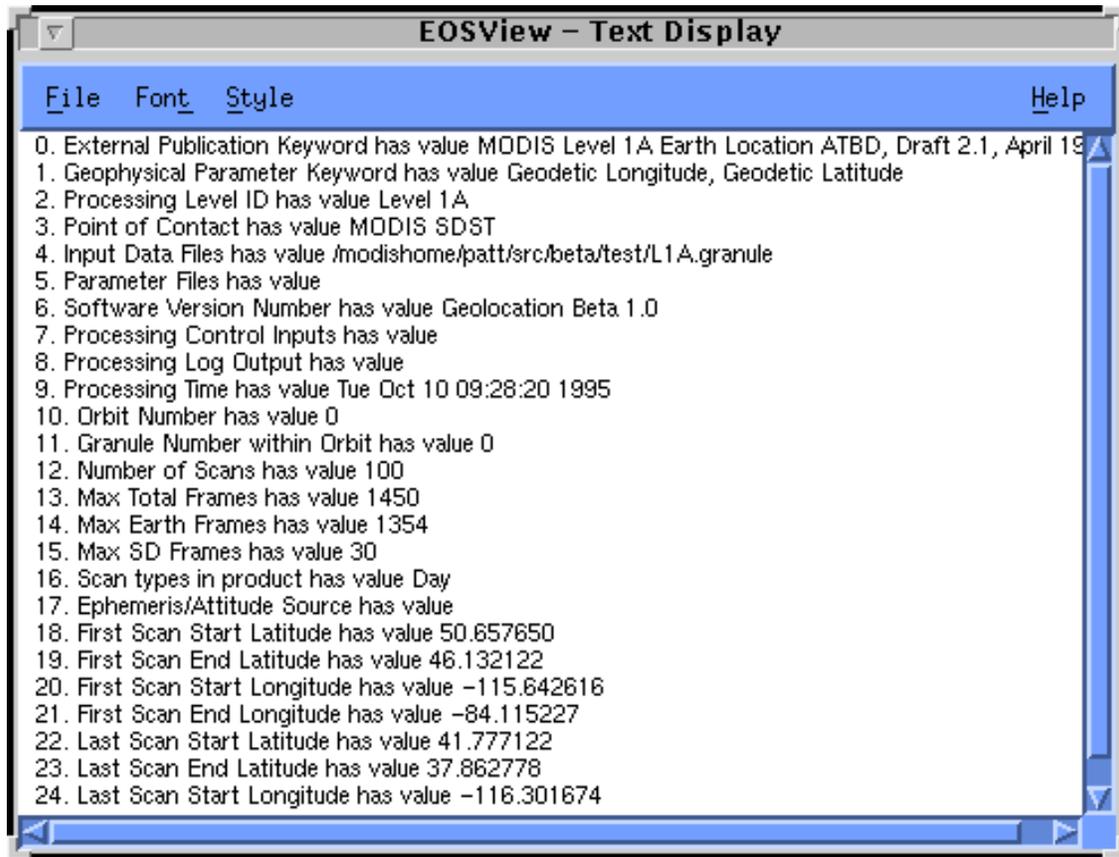


Figure 4.12.5-48. Text Display Pop-up

From the text window, the operator can do the following using the pull-down menus:

- **File** – exit the window
- **Font** – select from a list of fonts (e.g., courier, Helvetica). A box showing what the text looks like based on the selection is provided
- **Style** – select from a list of styles (e.g., normal, bold, italic) and point sizes (e.g., 8 pt, 10 pt.)
- **Help** – see Section 4.12.5.2.23 “Help Pulldown Menu”

4.12.5.2.23 Help Pulldown Menu

The Help option contains a pulldown menu with the following selections: help on context, on help, on window, keys, contents, index and version.

Help On Context – turns the mouse pointer into a “?” symbol, which can be clicked on an area of interest, bringing up help text for that item.

Help On Help – tells the operator how to use the EOSView on-line help feature (see Figure 4.12.5-49) to help understand how to navigate through the Help system using the on-line hypertext system.

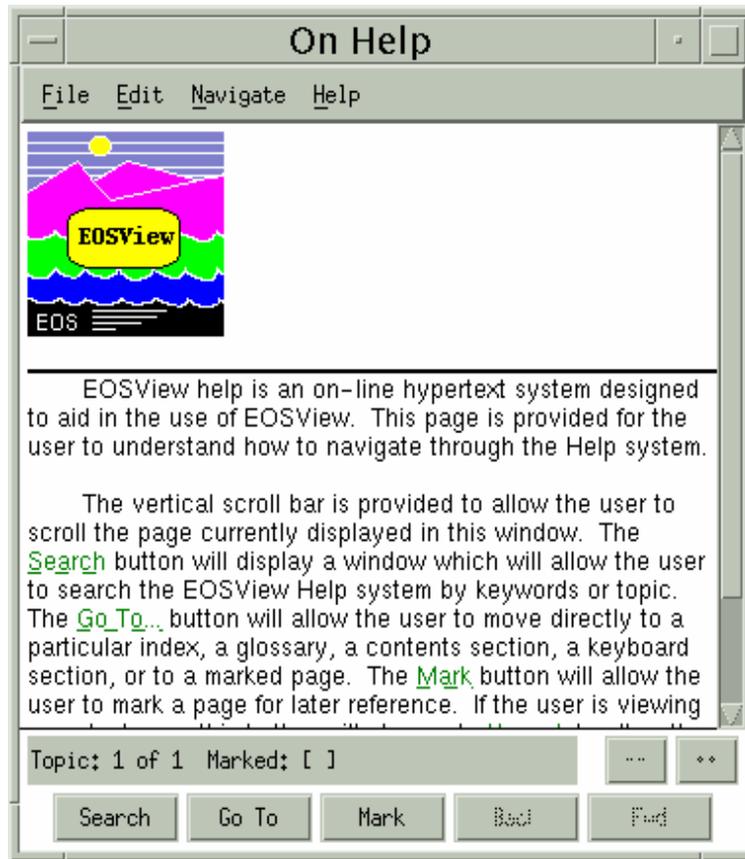


Figure 4.12.5-49. EOSView On Help Pop-up

- **File** – allows the operator to exit the On Help window. Print and Print Setup are not available
- **Edit** – allows the operator to Copy, Copy Part of a Topic, or Copy as Wrapped
- **Navigate** – allows the operator to search for a topic, go to a specified topic, bookmark items of interest, go forward and back to a topic (these items are available in the form of pushbuttons at the bottom of the screen), and view a previous or next topic
- **Help** – provides help on how to use help and “about help” (not functional)

The On Help window provides the following pushbuttons:

- The **Search** button provides a way to search the EOSView Help system in one of two ways. The operator can select to search by Topic in which case a list of topics are displayed for the operator to choose from or the operator can select search by Keyword in which case the operator is presented with a list of keywords from which to choose
- The **Go To** button allows the operator to move to one of five topics:
 1. Index - the help described in the Help - Index selection from the menu bar.
 2. Glossary - a defined glossary of selectable terms common to EOSView.
 3. the help described in the Help - Contents selection from the menu bar.
 4. the help described in the Help - On Keys selection from the menu bar.
 5. any marked page (see below).
- The **Mark** button allows the operator to mark a page. Once the page is marked the page appears in a list box in the "Topic Go to Dialog" box. The marked page can then be selected and immediately recalled. The "Mark" button appears as "Unmark" when viewing a marked page
- The **Unmark** button allows the operator to unmark a marked page. If the operator is currently viewing a marked page an "X" appears in the check box labeled "Marked:." Pressing the "Unmark" button causes the "X" to disappear and the page does not appear in the list box of the "Topic Goto Dialog"
- The **Back** button returns the operator to the previously viewed page. The operator should think of the help system as a book. The back button only appears sensitized if the previously viewed page would be logically backward from the point of current view
- The **Forward** button moves the operator to the last forward page viewed. The operator should think of the help system as a book. The forward button only appears sensitized if the previously viewed page would have a page number greater than the page being currently viewed

Help On Window

The Help On Window is the same as the Help On Index Window shown below.

Help On Keys

When Help On Keys is selected from the Help pulldown menu, the following message appears in a Keys Window: "EOSView uses no special keys to traverse through the program. To navigate through EOSView simply use the mouse and click on the options desired."

Help On Contents

The Help On Contents window tells the operator the EOSView is a tool written to assist operators view the contents of HDF files and it is capable of displaying the contents of files containing HDF-EOS data. More help can be obtained by selecting the topic desired (see Figure 4.12.5-50).

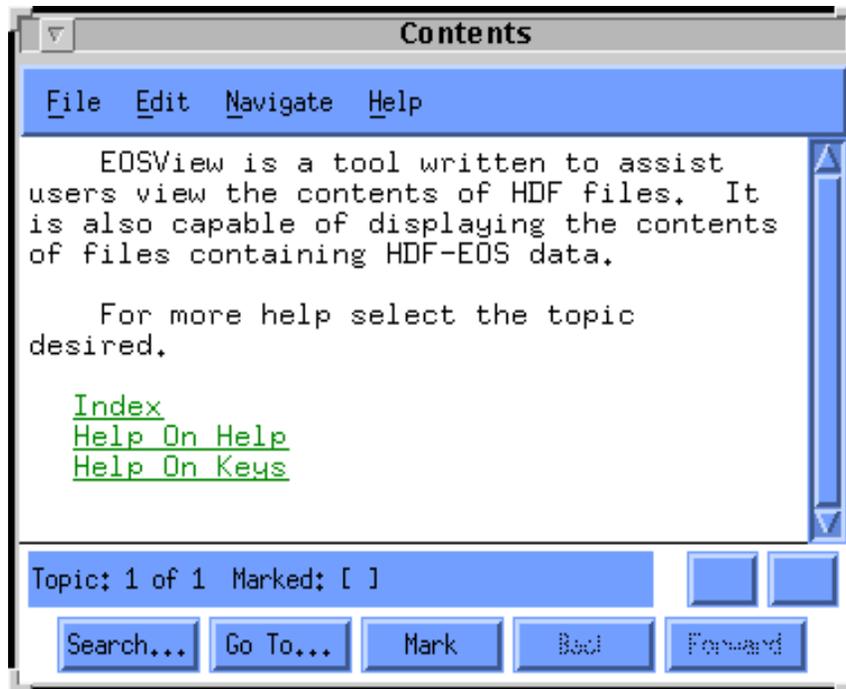


Figure 4.12.5-50. Help On Contents Pop-up

Help On Index

Selecting Help On Index brings up the Index window shown in Figure 4.12.5-51. This pop-up presents a list of each EOSView window and a list of hypertext help items.



Figure 4.12.5-51. Help On Index Pop-up

Help On Version

Selecting Help On Version from the Help pulldown menu brings up the dialog shown in Figure 4.12.5-52.

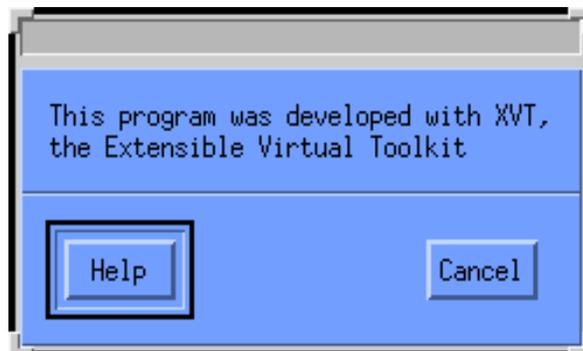


Figure 4.12.5-52. Help On Version Dialog

Clicking on the Help button takes the operator to the Help on Contents screen (Figure 4.12.5-49). Click on Cancel to close the dialog.

4.12.5.2.24 Save Pulldown Menu

The Save option allows the user to save the contents listed in the window to an ASCII file. Selecting the Save option displays the File Save Dialog (Figure 4.12.5-13). Upon entering a unique file name, the contents of the window is saved to an ASCII file exactly as they are listed in the window. This Save option is different from the EOSView table save option (described in Section 4.12.5.2.8); there is no option to save in binary format. This option exists in EOSView windows which incorporates a scrollable text list as the main window function.

4.12.5.3 Required Operating Environment

EOSView was built and tested in a multi-platform environment. The list of approved platforms, which includes information about operating system is given in Table 4.12.5-9. The platforms should run Motif 1.2 window manager.

Table 4.12.5-9. Operating Systems

Platform	OS	Version
Sun Sparc	Solaris	8
SGI	IRIX	6.5 or higher
DEC Alpha	OSF1	4.0
IBM	AIX	4.2

Table 4.12.5-10 lists the environment variables for EOSView. These variables are optional.

Table 4.12.5-10. Environment Variables Used by EOSView

Environment Variable	Description or Valid Ranges
UIDPATH	Location of the eosview.uid file containing a description of GUI objects.
EOSVIEWHELPPDIR	Location of eosview.csc (hypertext on-line help file) and eosview.dat file (idl commands).
ECS_HOME	Directory for File Selection dialog to begin.

The following attributes can be modified through the standard .Xdefaults file:

- focus policy (mouse pointer)
- icon geometry (size and location)
- fonts
- colors

4.12.5.3.1 Interfaces and Data Types

EOSView exchanges data of various types through internal interfaces within ECS:

- IDL for graphics
- XVT for GUI builder
- links with the HDF compile time library

4.12.5.4 Databases

None.

4.12.5.5 Special Constraints

EOSView reads only HDF and HDF-EOS formatted files.

4.12.5.6 Outputs

Outputs from EOSView include HDF file screen images and data displays.

4.12.5.7 Event and Error Messages

See Appendix A.

4.12.5.8 Reports

None.

4.12.6 ASTER On-demand Product Request Form (ODFRM)

ODFRM is a World Wide Web (WWW) based form that allows users to enter and submit ASTER on-demand processing orders. Users can perform the functions listed in Table 4.12.6-1 with the ODFRM.

Table 4.12.6-1. Common ECS Operator Functions Performed with ODFRM

Operating Function	Command/Script or GUI	Description	When and Why to Use
Login	ODFRM start page	User selects this to login to the ODFRM.	To order L1B (non-standard from GDS), the user needs to be an authorized ECS user.
On-demand Product Request	ASTER Product Requests	User selects one of the Radio buttons and clicks on Continue.	User can order the listed products by selecting the product and pressing continue button.

4.12.6.1 Quick Start Using ODFRM

The ODFRM tool is a web-based GUI which ECS users can access using Netscape or the Internet Explorer browser.

4.12.6.1.1 Accessing ODFRM

To view the ODFRM web page, first bring up the browser. Next, enter the URL of the ODFRM web page at the desired DAAC site. It is of the form:

http://<DAAC>0ins02u.ecs.nasa.gov:1000<mode>/ where:

<DAAC> is the DAAC site code where:

e is for EDC

g is for GSFC

l is for LARC

n is for NSIDC

(Note, **t1ins01u.ecs.nasa.gov:1000<mode>** is for the ECS Verification and Test Facility (VATC))

<mode> is the ECS mode where:

0 = OPS

1 = TS1

2 = TS2

4.12.6.2 ODFRM Home Page

Figure 4.12.6-1 shows the ODFRM home page.

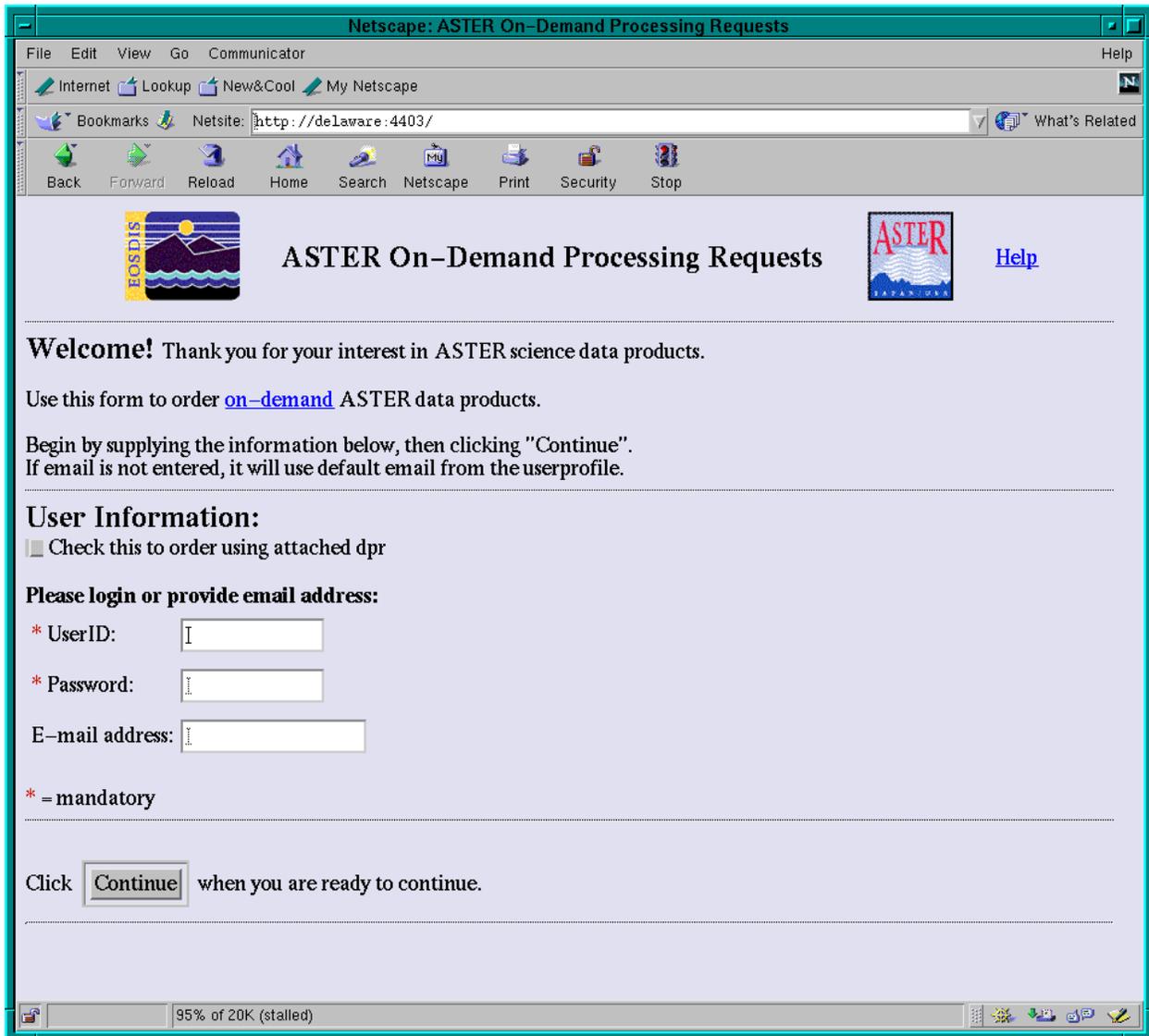


Figure 4.12.6-1. ODFRM Home Page

To order any ASTER on-demand products, one needs to be an ECS user. In the home page, enter your **User Id** and **Password**. The **E-mail address** field is an optional field entered only to override the standard email address, which ODFRM finds in a registered user's profile. If the request is to be sent using the Java DAR Tool (JDT), then the **Check this to order using attached DPR** button should be pressed. On finally pressing the **Continue** button, ODFRM brings up the page in Figure 4.12.6-2 for standard requests or Figure 4.12.6-3 for requests having an attached DPR.

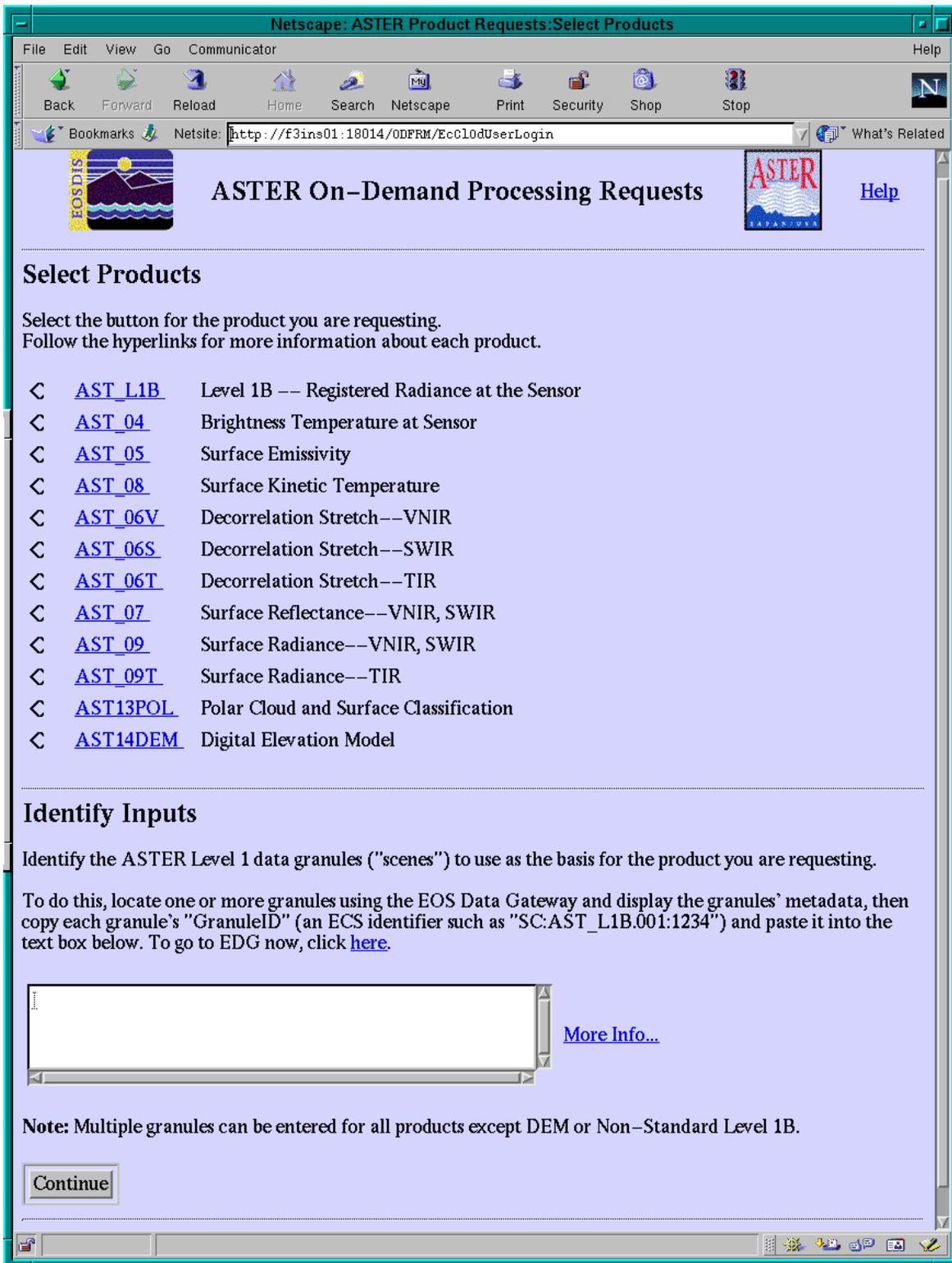


Figure 4.12.6-2. ASTER Product Request Selection Page

From the ASTER Product Request screen, the user can select and submit an order for products. Alternatively, by clicking on the hyperlinks, more information about the product can be obtained. The user has to supply AST_L1A or AST_L1B granules to order the Aster on-demand product.

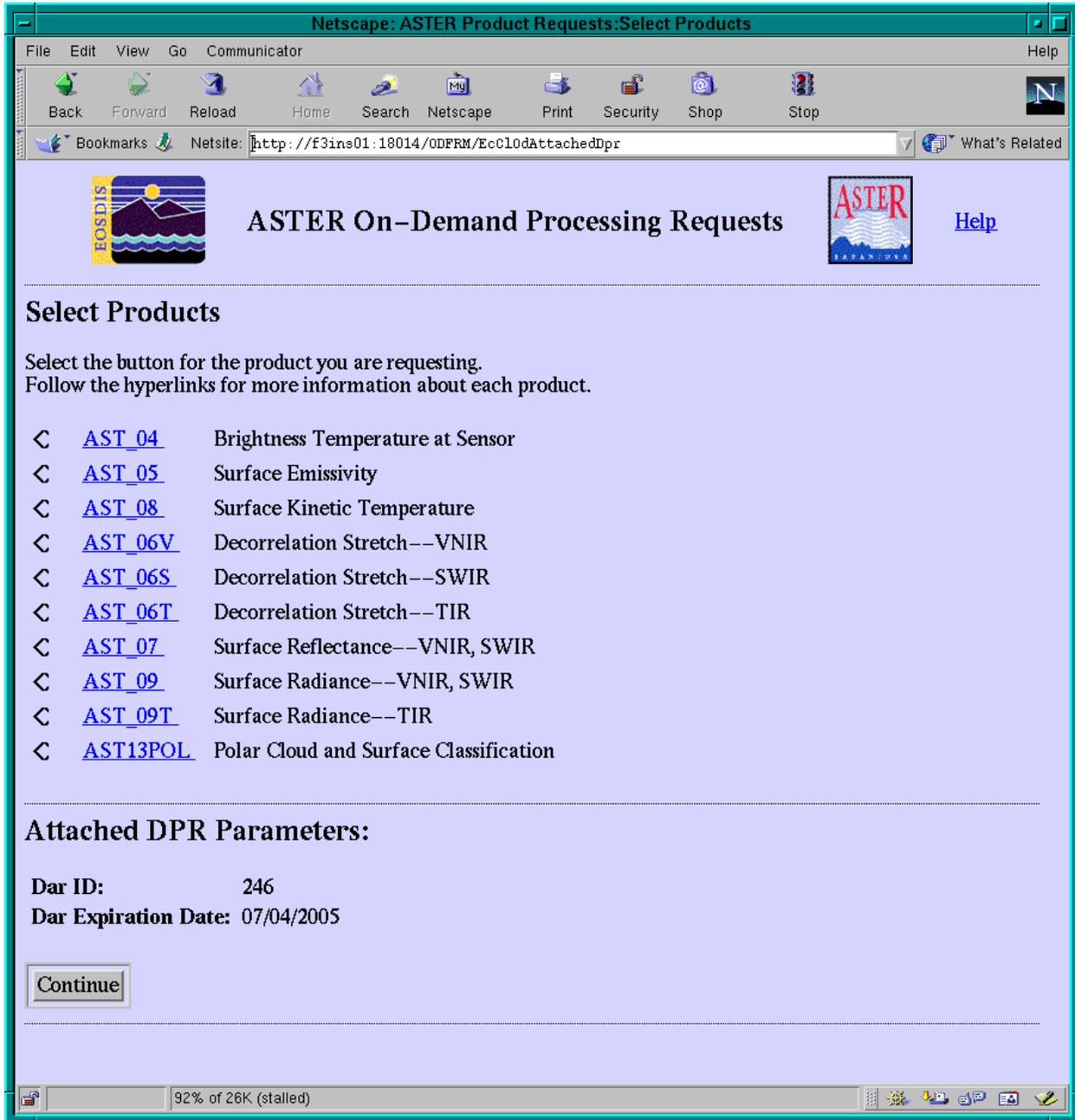


Figure 4.12.6-3. ASTER Product Request Selection Page Using Attached DPR

For product requests with an attached DPR, the user selects the product from the list in Figure 4.12.6.3, supplies the **DAR ID** and the **DAR Expiration Date** then hits the **Continue** button.

4.12.6.2.1 AST_L1B (non-standard)

To order AST_L1B (non-standard from GDS), visible on the Product Requests Selection page only to users with the correct privilege level, select the **AST_L1B** radio button and click on **Continue**. This brings up Figure 4.12.6-4 showing the AST_L1B Product Request page. Select the parameters and click on the **Continue** button to order the AST_L1B product. It takes you to the Product Request Confirmation page. The AST_L1B Product Request Page field descriptions are shown in Table 4.12.6-2.

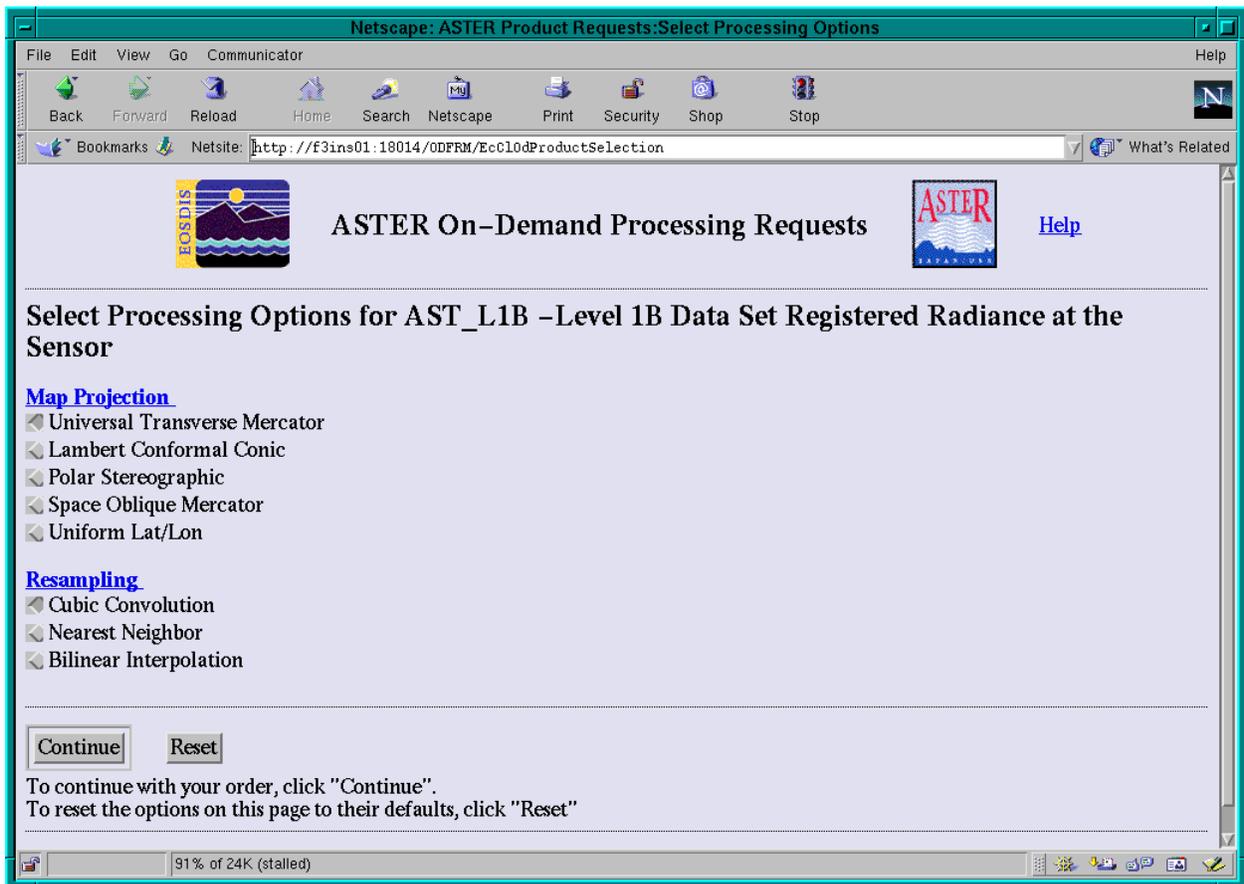


Figure 4.12.6-4. AST_L1B (non-standard) Product Request Page

Table 4.12.6-2. AST_L1B Product Request Page Field Descriptions

Field Name	Data Type	Entry	Description
Universal Transverse Mercator	Radio Button	Optional	Selects the Universal Transverse Mercator map projection (default map projection selection).
Lambert Conformal Conic	Radio Button	Optional	Selects the Lambert Conformal Conic map projection.
Polar Stereographic	Radio Button	Optional	Selects the Polar Stereographic map projection.
Space Oblique Mercator	Radio Button	Optional	Selects the Space Oblique Mercator map projection.
Uniform Lat/Lon	Radio Button	Optional	Selects the Uniform Lat/Lon map projection.
Cubic Convolution	Radio Button	Optional	Selects the Cubic Convolution image resampling technique (default resampling selection).
Nearest Neighbor	Radio Button	Optional	Selects the Nearest Neighbor image resampling technique.
Bilinear Interpolation	Radio Button	Optional	Selects the Bilinear Interpolation image resampling technique.

4.12.6.2.2 AST_04

To order the AST_04 (ASTER Level 2 Brightness Temperature at the Sensor product), press the **AST_04** radio button on the Product Request page and then the **Continue** button. This takes you directly to the Media Options page, illustrated in Figure 4.12.6-16.

4.12.6.2.3 AST_05

To order the AST_05 (ASTER Level 2 Emissivity product), select the **AST_05** radio button on the Product Request Selection page and click **Continue**. This brings up Figure 4.12.6-5 showing the AST_05 Product Request page. Click on the **Continue** button to order the AST_05 product. This takes you to the Media and Shipping Information page. The AST_05 Product Request Page field descriptions are shown in Table 6.12.6-3.

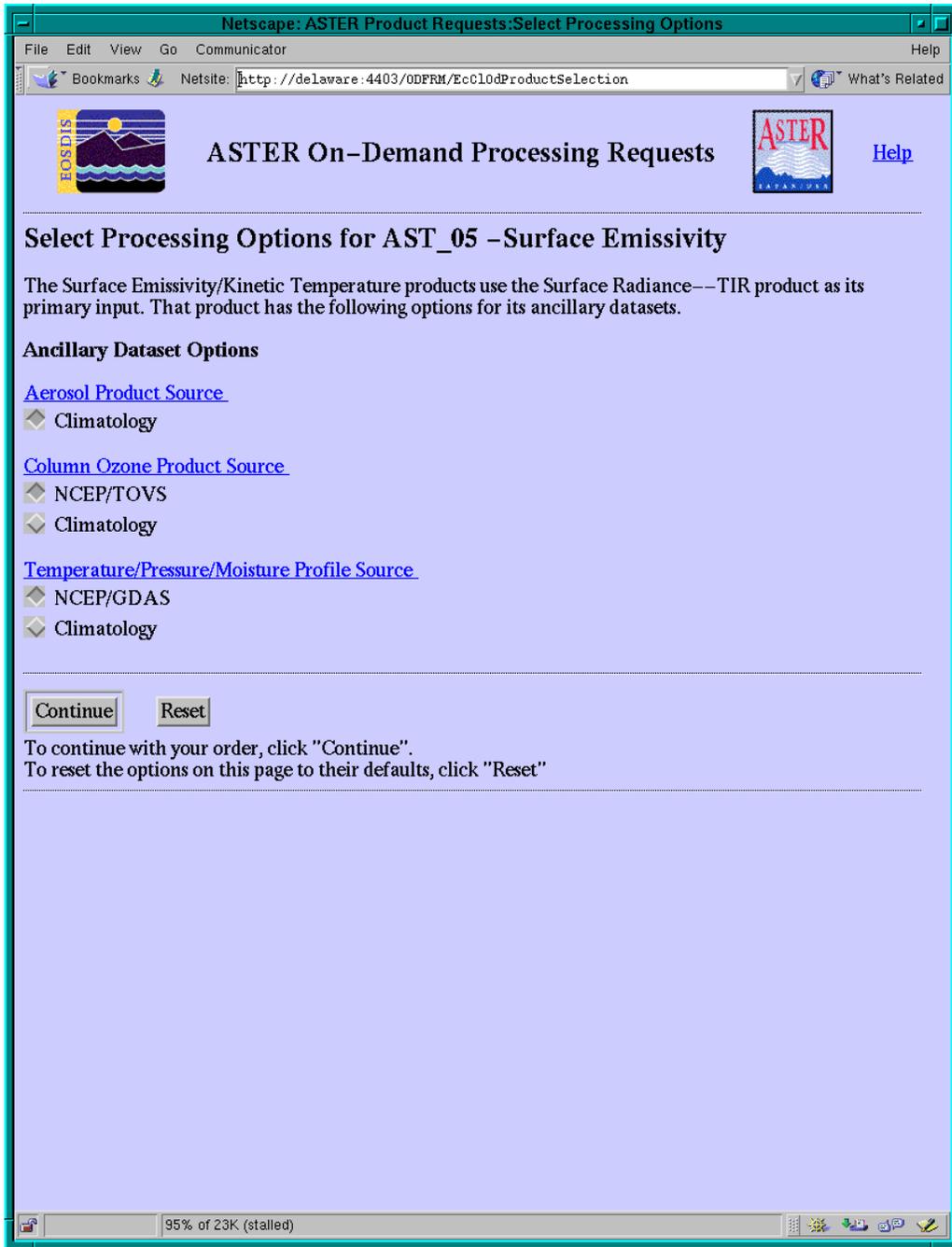


Figure 4.12.6-5. AST_05 Product Request Page

Table 4.12.6-3. AST_05 Product Request Page Field Descriptions

Field Name	Data Type	Entry	Description
Climatology	Radio Button	Optional	Selects the Climatology Aerosol Product Source (default selection).
NCEP/TOVS	Radio Button	Optional	Selects the NCEP/TOVS Column Ozone Product Source (default selection).
Climatology	Radio Button	Optional	Selects the Climatology Column Ozone Product Source.
NCEP/GDAS	Radio Button	Optional	Selects the NCEP/GDAS Column Ozone Product Source (default selection).
Climatology	Radio Button	Optional	Selects the Climatology Column Ozone Product Source.

4.12.6.2.4 AST_08

To order the AST_08 (ASTER Level 2 Surface Temperature product), select the **AST_08** radio button on the Product Request page and click on **Continue**. This brings up Figure 4.12.6-6 showing the AST_08 Product Request Page. Click on the **Continue** button to order the AST_08 product. This takes you to the Media and Shipping Information page. The AST_08 Product Request page field descriptions are shown in Table 4.12.6-4.

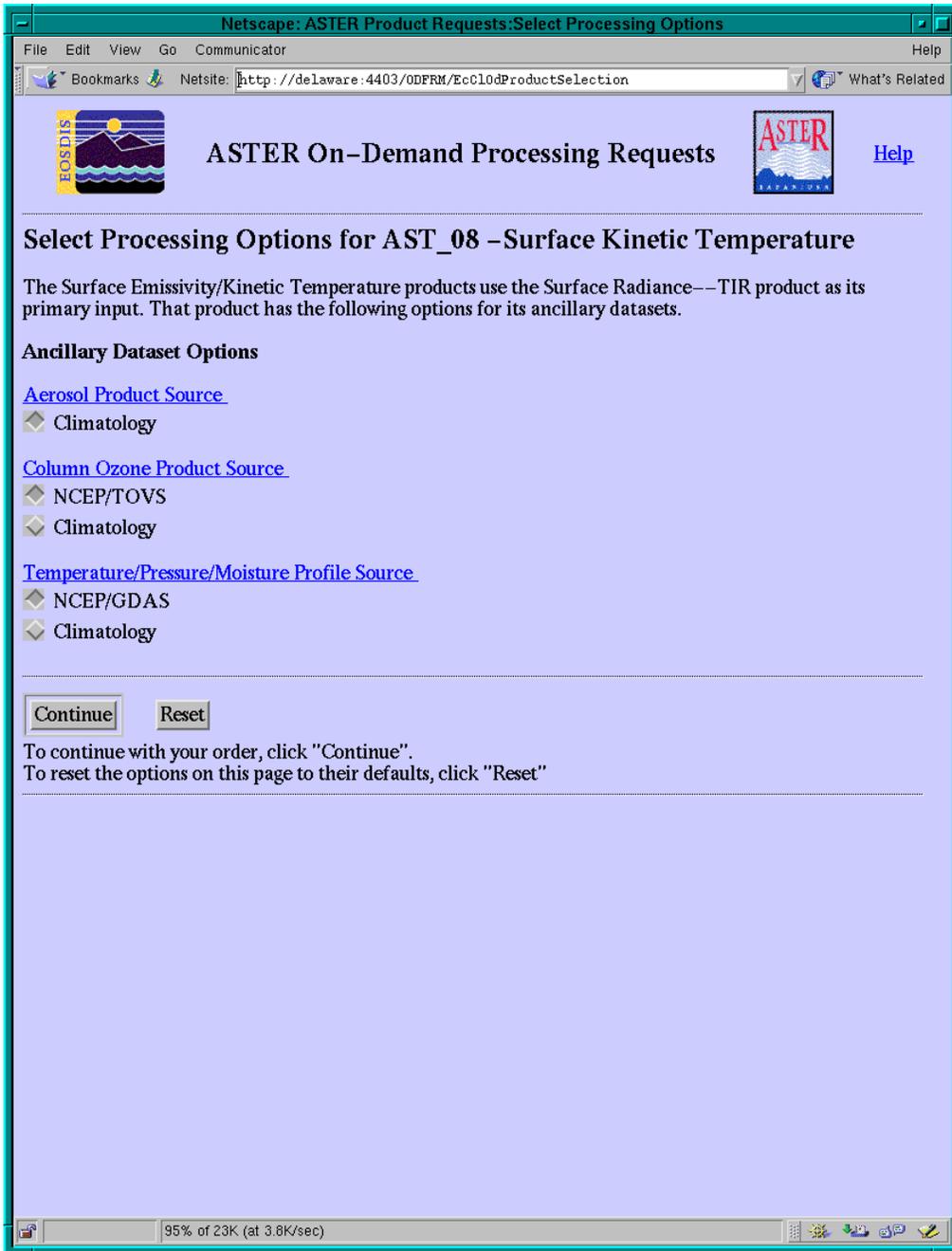


Figure 4.12.6-6. AST_08 Product Request Page

Table 4.12.6-4. AST_08 Product Request Page Field Descriptions

Field Name	Data Type	Entry	Description
Climatology	Radio Button	Optional	Selects the Climatology Aerosol Product Source (default selection).
NCEP/TOVS	Radio Button	Optional	Selects the NCEP/TOVS Column Ozone Product Source (default selection).
Climatology	Radio Button	Optional	Selects the Climatology Column Ozone Product Source.
NCEP/GDAS	Radio Button	Optional	Selects the NCEP/GDAS Temperature/Pressure/Moisture Profile Source (default selection).
Climatology	Radio Button	Optional	Selects the Climatology Temperature/Pressure/Moisture Profile Source

4.12.6.2.5 AST_06V

To order the AST_06V (ASTER Level 2 Decorrelation Stretch (VNIR) product), select the **AST_06V** radio button on the Product Request Selection page and then click on **Continue**. This brings up Figure 4.12.6-7 showing the AST_06V Product Request Page. Fill in all the parameters and click on the **Continue** button to order the AST_06V product. This takes you to the Media and Shipping Information page. The AST_06V Product Request page field descriptions are shown in Table 4.12.6-5.

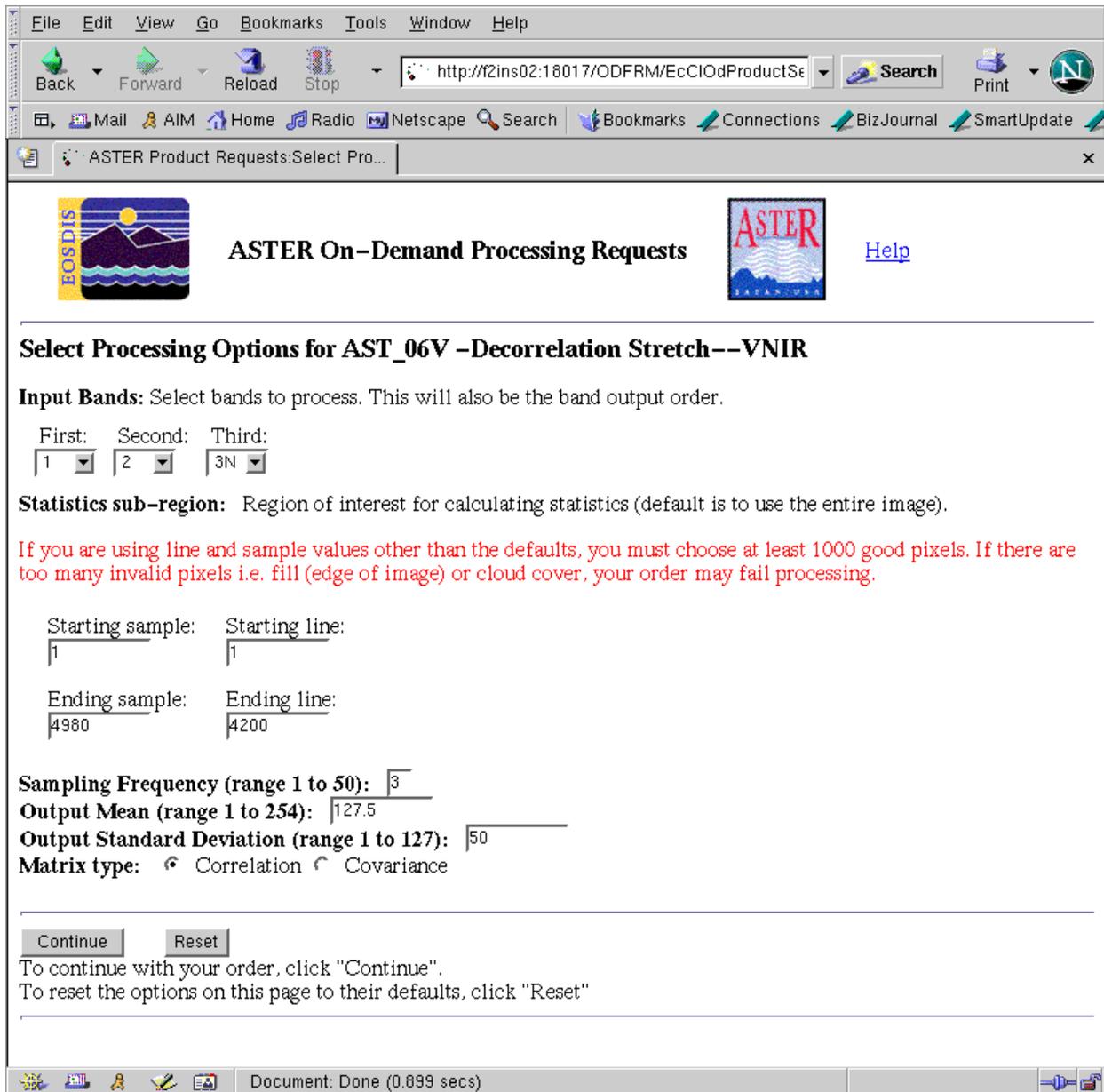


Figure 4.12.6-7. AST_06V Product Request Page

Table 4.12.6-5. AST_06V Product Request Page Field Descriptions

Field Name	Data Type	Entry	Description	Default Value
First	Drop-down menu	Required	First input band	1
Second	Drop-down menu	Required	Second input band	2
Third	Drop-down menu	Required	Third input band	3N
Starting sample	Integer	Required	Statistics sub-region Starting sample	1
Starting line	Integer	Required	Statistics sub-region Starting line	1
Ending sample	Integer	Required	Statistics sub-region Ending sample	4980
Ending line	Integer	Required	Statistics sub-region Ending line	4200
Sampling Frequency Range	Integer	Required	Sampling frequency of the processed data	3
Output Mean	Float	Required	Output mean of the processed data	127.5
Output Standard Deviation	Integer	Required	Standard deviation of the processed data	50
Correlation	Radio Button	Required	Matrix type (default value)	N/A
Covariance	Radio Button	Required	Matrix type	N/A

4.12.6.2.6 AST_06S

To order the AST_06S (ASTER Level 2 Decorrelation Stretch (SWIR) product), select the **AST_06S** radio button on the Product Request Selection page and click on **Continue**. This brings up Figure 4.12.6-8 showing the AST_06S Product Request page. Fill in all the parameters and click on the **Continue** button to order the AST_06S product. This takes you to the Media and Shipping Information page. The AST_06S Product Request page field descriptions are shown in Table 4.12.6-6.

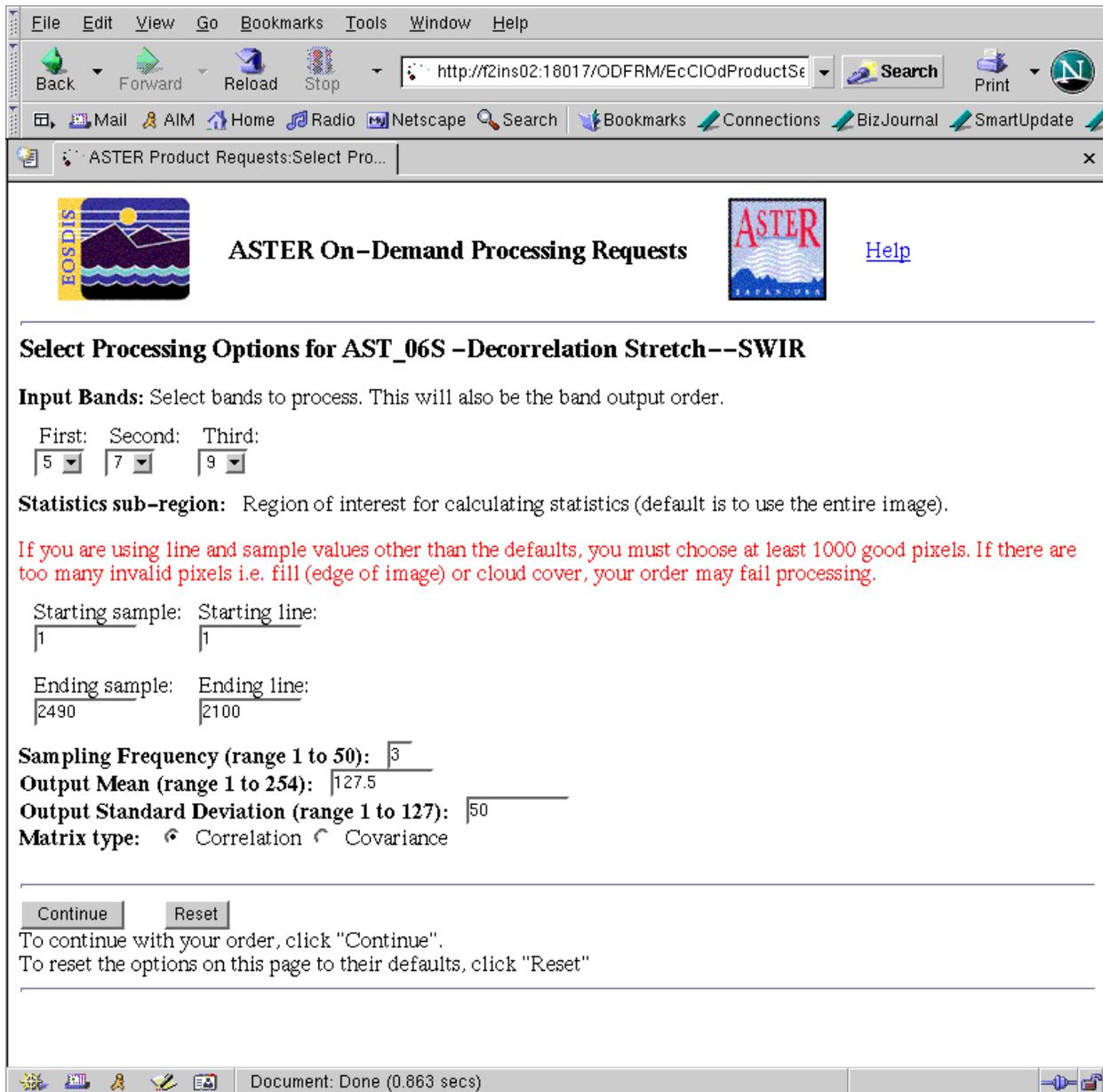


Figure 4.12.6-8. AST_06S Product Request Page

Table 4.12.6-6. AST_06S Product Request Page Field Descriptions

Field Name	Data Type	Entry	Description	Default Value
First	Drop-down menu	Required	First input band	5
Second	Drop-down menu	Required	Second input band	7
Third	Drop-down menu	Required	Third input band	9
Starting sample	Integer	Required	Statistics sub-region Starting sample	1
Starting line	Integer	Required	Statistics sub-region Starting line	1
Ending sample	Integer	Required	Statistics sub-region Ending sample	2490
Ending line	Integer	Required	Selects Statistics sub-region Ending line	2100
Sampling Frequency Range	Integer	Required	Sampling frequency of the processed data	3
Output Mean	Float	Required	Output mean of the processed data	127.5
Output Standard Deviation	Integer	Required	Standard deviation of the processed data	50
Correlation	Radio Button	Required	Matrix type (default value)	N/A
Covariance	Radio Button	Required	Matrix type	N/A

4.12.6.2.7 AST_06T

To order the AST_06T (ASTER Level 2 Decorrelation Stretch (TIR) product), select the **AST_06T** radio button on the Product Request Selection page and click on **Continue**. This brings up Figure 4.12.6-9 showing the AST_06T Product Request page. Fill in all the parameters and click on the **Continue** button to order the AST_06T product. This takes you to the Media and Shipping Information page. The AST_06T Product Request page field descriptions are shown in Table 4.12.6-7.

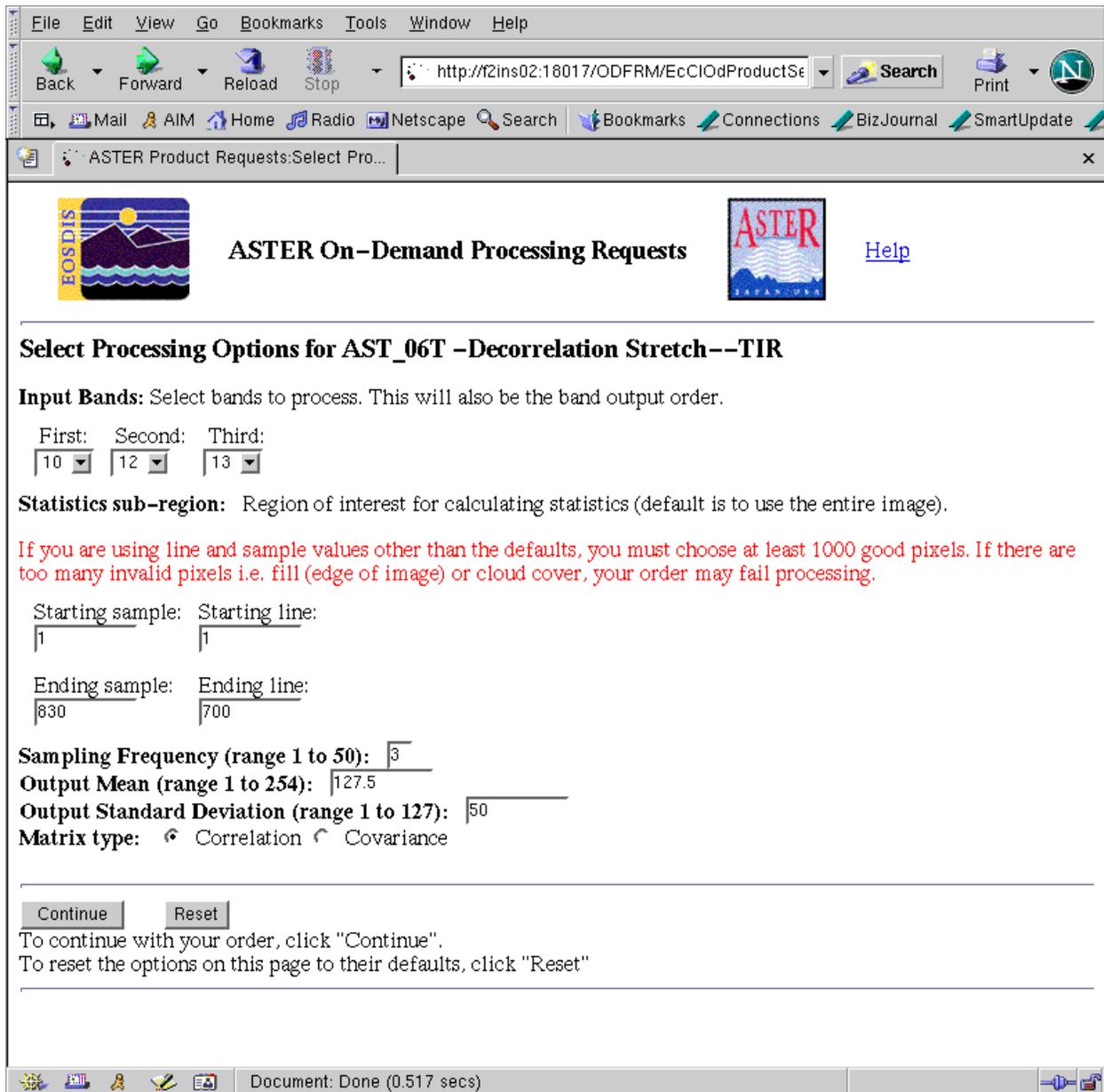


Figure 4.12.6-9. AST_06T Product Request Page

Table 4.12.6-7. AST_06T Product Request Page Field Descriptions

Field Name	Data Type	Entry	Description	Default Value
First	Drop-down menu	Required	First input band	10
Second	Drop-down menu	Required	Second input band	12
Third	Drop-down menu	Required	Third input band	13
Starting sample	Integer	Required	Statistics sub-region Starting sample	1
Starting line	Integer	Required	Statistics sub-region Starting line	1
Ending sample	Integer	Required	Statistics sub-region Ending sample	830
Ending line	Integer	Required	Statistics sub-region Ending line	700
Sampling Frequency Range	Integer	Required	Sampling frequency of the processed data	3
Output Mean	Float	Required	Output mean of the processed data	127.5
Output Standard Deviation	Integer	Required	Standard deviation of the processed data	50
Correlation	Radio Button	Required	Matrix type (default value)	N/A
Covariance	Radio Button	Required	Matrix type	N/A

4.12.6.2.8 AST_07

To order the AST_07 (ASTER Level 2 Surface Reflectance (VNIR, SWIR) product), select the **AST_06T** radio button on the Product Request Selection page and then click on **Continue**. This brings up Figure 4.12.6-10 showing the AST_07 Product Request page. Select the parameters and click on the **Continue** button to order the AST_07 Product. This takes you to the Media and Shipping Information page. The AST_07 Product Request page field descriptions are shown in Table 4.12.6-8.

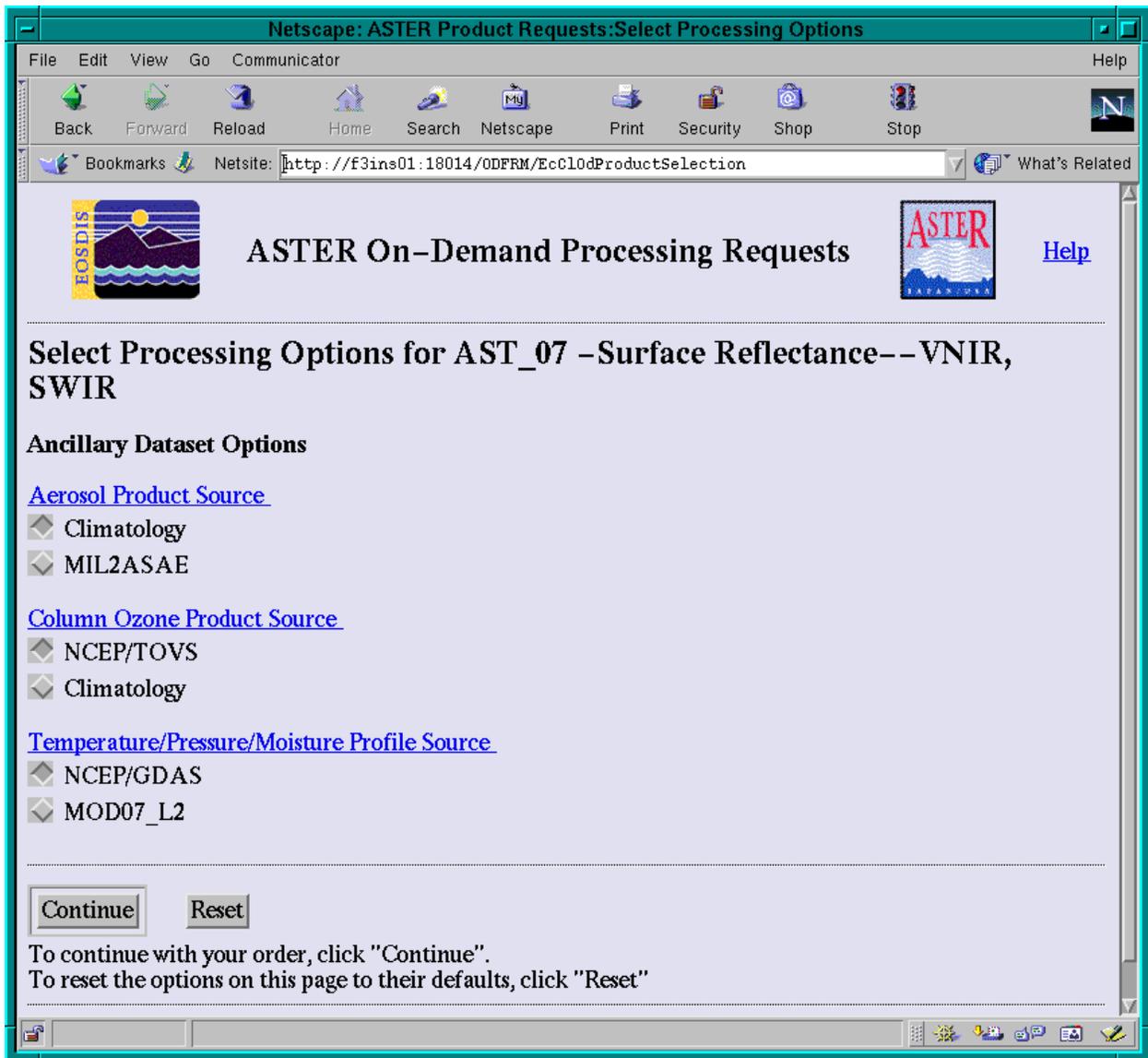


Figure 4.12.6-10. AST_07 Product Request Page

Table 4.12.6-8. AST_07 Product Request Page Field Descriptions

Field Name	Data Type	Entry	Description
Climatology	Radio Button	Optional	Selects the Climatology Aerosol Product Source (default selection).
MIL2ASAE	Radio Button	Optional	Selects the MIL2ASAE Aerosol Product Source
NCEP/TOVS	Radio Button	Optional	Selects the NCEP/TOVS Column Ozone Product Source (default selection).
Climatology	Radio Button	Optional	Selects the Climatology Column Ozone Product Source.
NCEP/GDAS	Radio Button	Optional	Selects the NCEP/GDAS Temperature/Pressure/Moisture Profile Source (default selection).
MOD07_L2	Radio Button	Optional	Selects the MOD07_L2 Temperature/Pressure/Moisture Profile Source.

4.12.6.2.9 AST_09

To order the AST_09 (ASTER Level 2 Surface Radiance (VNIR, SWIR) product), select the **AST_09** radio button on the Product Request Selection page and click on **Continue**. This brings up Figure 4.12.6-11 showing the AST_09 Product Request page. Select the parameters and click on the Continue button to order the AST_09 product. This takes you to the Media and Shipping Information page. The AST_06T Product Request page field descriptions are shown in table 4.12.6-9.

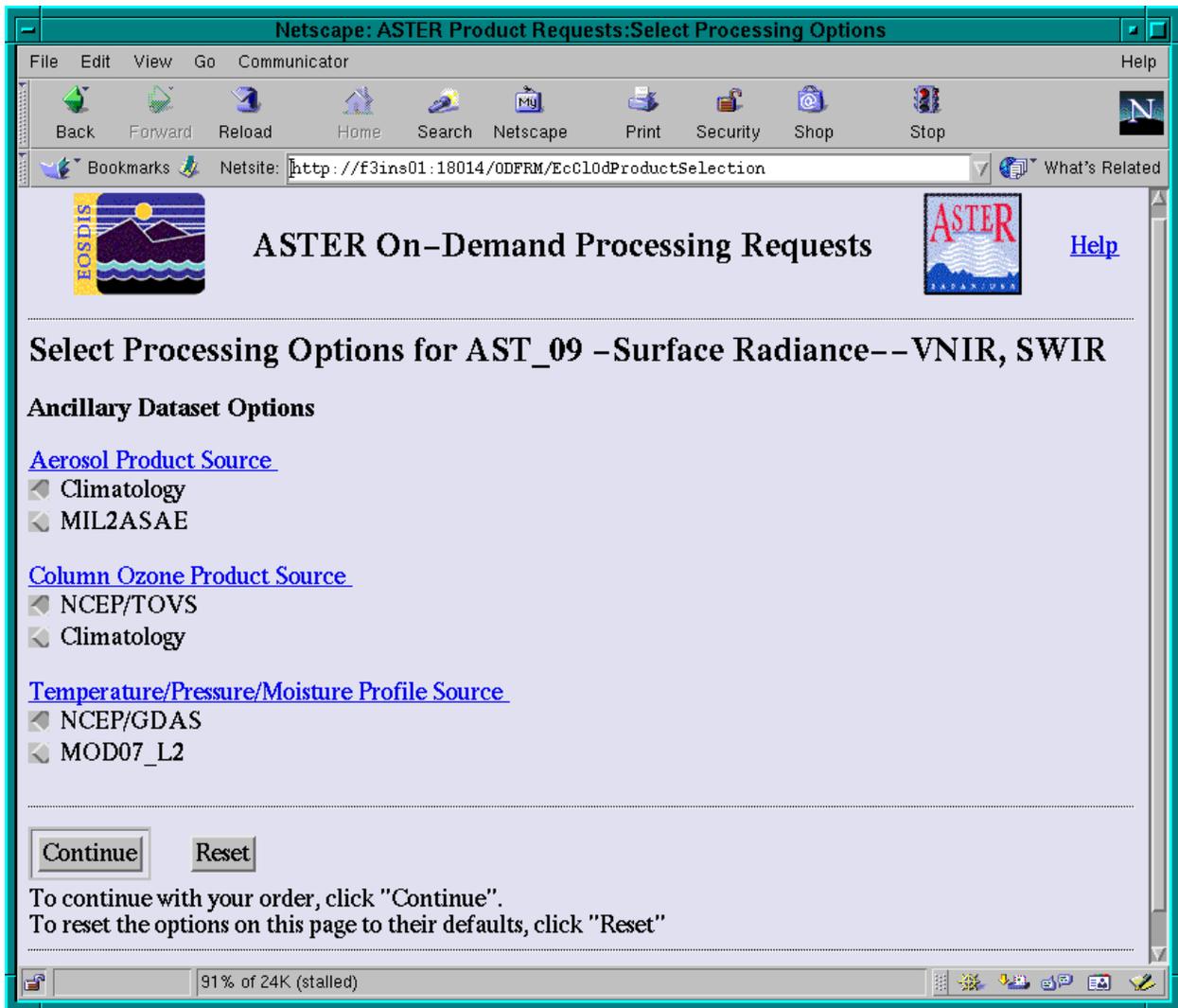


Figure 4.12.6-11. AST_09 Product Request Page

Table 4.12.6-9. AST_09 Product Request Page Field Descriptions

Field Name	Data Type	Entry	Description
Climatology	Radio Button	Optional	Selects the Climatology Aerosol Product Source (default selection).
MIL2ASAE	Radio Button	Optional	Selects the MIL2ASAE Aerosol Product Source
NCEP/TOVS	Radio Button	Optional	Selects the NCEP/TOVS Column Ozone Product Source (default selection).
Climatology	Radio Button	Optional	Selects the Climatology Column Ozone Product Source.
NCEP/GDAS	Radio Button	Optional	Selects the NCEP/GDAS Temperature/Pressure/Moisture Profile Source (default selection).
MOD07_L2	Radio Button	Optional	Selects the MOD07_L2 Temperature/Pressure/Moisture Profile Source.

4.12.6.2.10 AST_09T

To order the AST_09T (ASTER Level 2 Surface Radiance (TIR) product), select the **AST_09T** radio button on the Product Request Selection page and click on **Continue**. This brings up Figure 4.12.6-12 showing the AST_09T Product Request page. Select the parameters and click on the **Continue** button to order the AST_09T product. This takes you to the Media and Shipping Information page. The AST_09T Product Request page field descriptions are shown in Table 4.12.6-10.

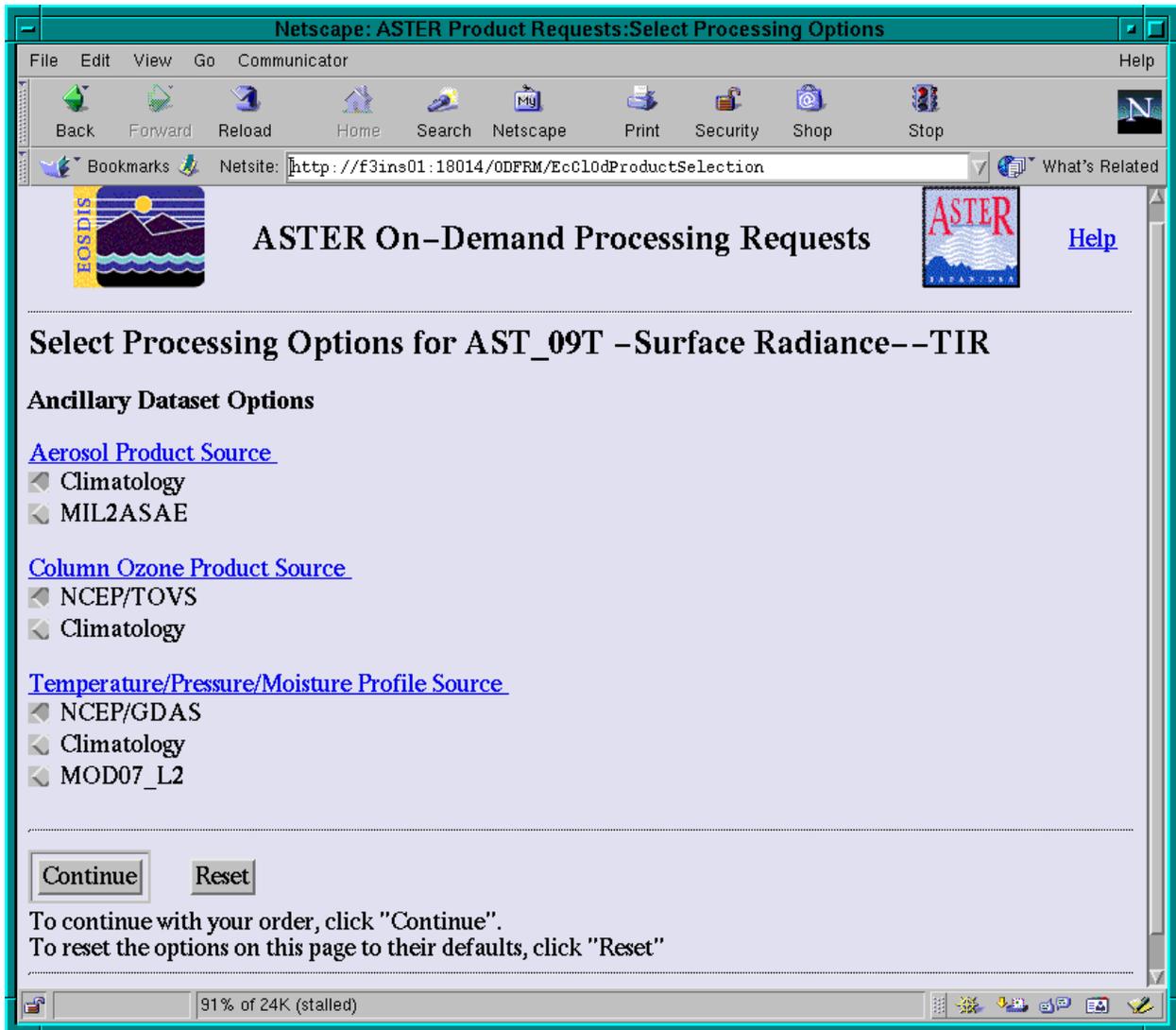


Figure 4.12.6-12. AST_09T Product Request Page

Table 4.12.6-10. AST_09T Product Request Page Field Descriptions

Field Name	Data Type	Entry	Description
Climatology	Radio Button	Optional	Selects the Climatology Aerosol Product Source (default selection).
MIL2ASAE	Radio Button	Optional	Selects the MIL2ASAE Aerosol Product Source
NCEP/TOVS	Radio Button	Optional	Selects the NCEP/TOVS Column Ozone Product Source (default selection).
Climatology	Radio Button	Optional	Selects the Climatology Column Ozone Product Source.
NCEP/GDAS	Radio Button	Optional	Selects the NCEP/GDAS Temperature/Pressure/Moisture Profile Source (default selection).
Climatology	Radio Button	Optional	Selects the Climatology Temperature/Pressure/Moisture Profile Source
MOD07_L2	Radio Button	Optional	Selects the MOD07_L2 Temperature/Pressure/Moisture Profile Source.

4.12.6.2.11 AST13POL

To order the AST13POL (ASTER Polar Cloud and Surface Classification), press the **AST13POL** radio button on the Product Request page and then the **Continue** button. This takes you directly to the Media Options page, illustrated in Figure 4.12.6-16.

4.12.6.2.12 AST14DEM

To order the AST14DEM (ASTER DEM product), select the **AST14DEM** radio button on the Product Request Selection page and click on **Continue**. This brings up Figure 4.12.6-13 showing the AST14DEM Product Request page. Select the parameters and click on the **Continue** button to order the AST14DEM product. This takes you to the Media and Shipping Information page. The AST14DEM Product Request page field descriptions are shown in Table 4.12.6-11.



Figure 4.12.6-13. AST14DEM Product Request Page

Table 4.12.6-11. AST14DEM Product Request Page Field Descriptions

Field Name	Data Type	Entry	Description	Default Value
User Category	Drop-down Menu	Optional	User Category	Other
Grant Identification Number	ASCII Text	Optional (unless User Category is "Other")	Grant Identification Number used to verify the User Category	None
Relative	Radio Button	Optional	Selects the Relative DEM type (default selection)	N/A
Absolute	Radio Button	Optional	Selects the Absolute DEM type	N/A
NAD83	Radio Button	Optional	Selects the NAD83 GCP Horizontal Datum (default selection)	N/A
WGS84	Radio Button	Optional	Selects the WGS84 GCP Horizontal Datum	N/A
Lat/Lon	Radio Button	Optional	Selects the Lat/Lon GCP Coordinate System (default selection)	N/A
UTM	Radio Button	Optional	Selects the UTM GCP Coordinate System	N/A
GCP Comments	ASCII Text	Optional	GCP description	None

If the DEM Type selected is **Absolute** and the GCP Coordinate System is **Lat/Long (Deg-Min-Sec)** then the page in Figure 4.12.6-14 is shown. The AST14DEM Lat/Long Ground Control Points Processing Options page field descriptions are shown in Table 4.12.6-12.

If the DEM Type selected is **Absolute** and the GCP Coordinate System is **UTM (Northing/Easting/Zone/Row)** then the page in Figure 4.12.6-15 is shown. The AST14DEM UTM Ground Control Points Processing Options page field descriptions are shown in Table 4.12.6-13.

Netscape: ASTER Product Requests:Select Processing Options

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Bookmarks Netsite: http://F3ins01:18014/ODFRM/EcC10dProductSelection

EOSDIS ASTER On-Demand Processing Requests ASTER Help

Select Processing Options for AST14DEM –ASTER Digital Elevation Model

[Ground Control Points](#) for creating an Absolute DEM

	Coordinates (Degrees:Minutes:Seconds.Fractions)				Elevation Measurement Accuracy (in meters)			Feature Location in VNIR Band 3N		Feature Location in VNIR Band 3B		GCP Source	Feature Type	
	Latitude		Longitude		Elevation	X	Y	Z	Line	Sample	Line			Sample
Reset	<input type="text"/>	N	<input type="text"/>	E	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS	<input type="text"/>
Reset	<input type="text"/>	N	<input type="text"/>	E	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS	<input type="text"/>
Reset	<input type="text"/>	N	<input type="text"/>	E	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS	<input type="text"/>
Reset	<input type="text"/>	N	<input type="text"/>	E	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS	<input type="text"/>
Reset	<input type="text"/>	N	<input type="text"/>	E	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS	<input type="text"/>
Reset	<input type="text"/>	N	<input type="text"/>	E	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS	<input type="text"/>
Reset	<input type="text"/>	N	<input type="text"/>	E	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS	<input type="text"/>
Reset	<input type="text"/>	N	<input type="text"/>	E	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS	<input type="text"/>
Reset	<input type="text"/>	N	<input type="text"/>	E	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS	<input type="text"/>
Reset	<input type="text"/>	N	<input type="text"/>	E	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS	<input type="text"/>

Apply Submit the Order

Clear All Clear All Content

95% of 40K (stalled)

Figure 4.12.6-14. GCP for Absolute DEM (Coordinates Lat/Long- Deg, Min, Sec)

**Table 4.12.6-12. AST14DEM Lat/Long Ground Control Points
Processing Options Page Field Descriptions**

Field Name	Data Type	Entry	Description
Latitude	ASCII Text and Drop-down menu	Optional	Latitude coordinate and orientation
Longitude	ASCII Text and Drop-down menu	Optional	Longitude coordinate and orientation
Elevation	ASCII Text	Optional	Elevation Accuracy value
X	ASCII Text	Optional	Elevation Accuracy value
Y	ASCII Text	Optional	Elevation Accuracy value
Z	ASCII Text	Optional	Elevation Accuracy value
Line	ASCII Text	Optional	Feature Location line in VNIR Band 3N
Sample	ASCII Text	Optional	Feature Location sample in VNIR Band 3N
Line	ASCII Text	Optional	Feature Location line in VNIR Band 3B
Sample	ASCII Text	Optional	Feature Location sample in VNIR Band 3B
GCP Source	Drop-down Menu	Optional	GCP Source
Feature Type	ASCII Text	Optional	Feature Type description

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ASTER On-Demand Processing Requests  [Help](#)

Select Processing Options for AST14DEM –ASTER Digital Elevation Model

[Ground Control Points](#) for creating an Absolute DEM

	Coordinates (UTM Zone-Row)				Elevation Measurement Accuracy (in meters)			Feature Location in VNIR Band 3N		Feature Location in VNIR Band 3B		GCP Source	Feature Type	
	Zone	Northing	Row	Easting	Elevation	X	Y	Z	Line	Sample	Line			Sample
<input type="button" value="Reset"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS <input type="button" value="v"/>	<input type="text"/>
<input type="button" value="Reset"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS <input type="button" value="v"/>	<input type="text"/>
<input type="button" value="Reset"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS <input type="button" value="v"/>	<input type="text"/>
<input type="button" value="Reset"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS <input type="button" value="v"/>	<input type="text"/>
<input type="button" value="Reset"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS <input type="button" value="v"/>	<input type="text"/>
<input type="button" value="Reset"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS <input type="button" value="v"/>	<input type="text"/>
<input type="button" value="Reset"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS <input type="button" value="v"/>	<input type="text"/>
<input type="button" value="Reset"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS <input type="button" value="v"/>	<input type="text"/>
<input type="button" value="Reset"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS <input type="button" value="v"/>	<input type="text"/>
<input type="button" value="Reset"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	GPS <input type="button" value="v"/>	<input type="text"/>

Submit the Order

Clear All Content

94% of 39K (stalled)

Figure 4.12.6-15. GCP for Absolute DEM (Coordinates UTM Zone-Row, Northing-Easting)

**Table 4.12.6-13. AST14DEM UTM Ground Control Points Processing Options
Page Field Descriptions**

Field Name	Data Type	Entry	Description
Zone	ASCII Text	Optional	Coordinate zone
Northing	ASCII Text	Optional	Coordinate zone longitudinal grid line
Row	ASCII Text	Optional	Coordinate zone row
Easting	ASCII Text	Optional	Coordinate zone latitudinal grid line
Elevation	ASCII Text	Optional	Elevation measurement accuracy
X	ASCII Text	Optional	Elevation Accuracy value
Y	ASCII Text	Optional	Elevation Accuracy value
Z	ASCII Text	Optional	Elevation Accuracy value
Line	ASCII Text	Optional	Feature Location line in VNIR Band 3N
Sample	ASCII Text	Optional	Feature Location sample in VNIR Band 3N
Line	ASCII Text	Optional	Feature Location line in VNIR Band 3B
Sample	ASCII Text	Optional	Feature Location sample in VNIR Band 3B
GCP Source	Drop-down Menu	Optional	GCP Source
Feature Type	ASCII Text	Optional	Feature Type description
X	ASCII Text	Optional	Elevation Accuracy
Y	ASCII Text	Optional	Elevation Accuracy

4.12.6.2.13 Media and Shipping Information

After selecting a product for ordering and hitting the **Continue** button on a Product Options page, the Media Options page shown in Figure 4.12.6-16 appears.

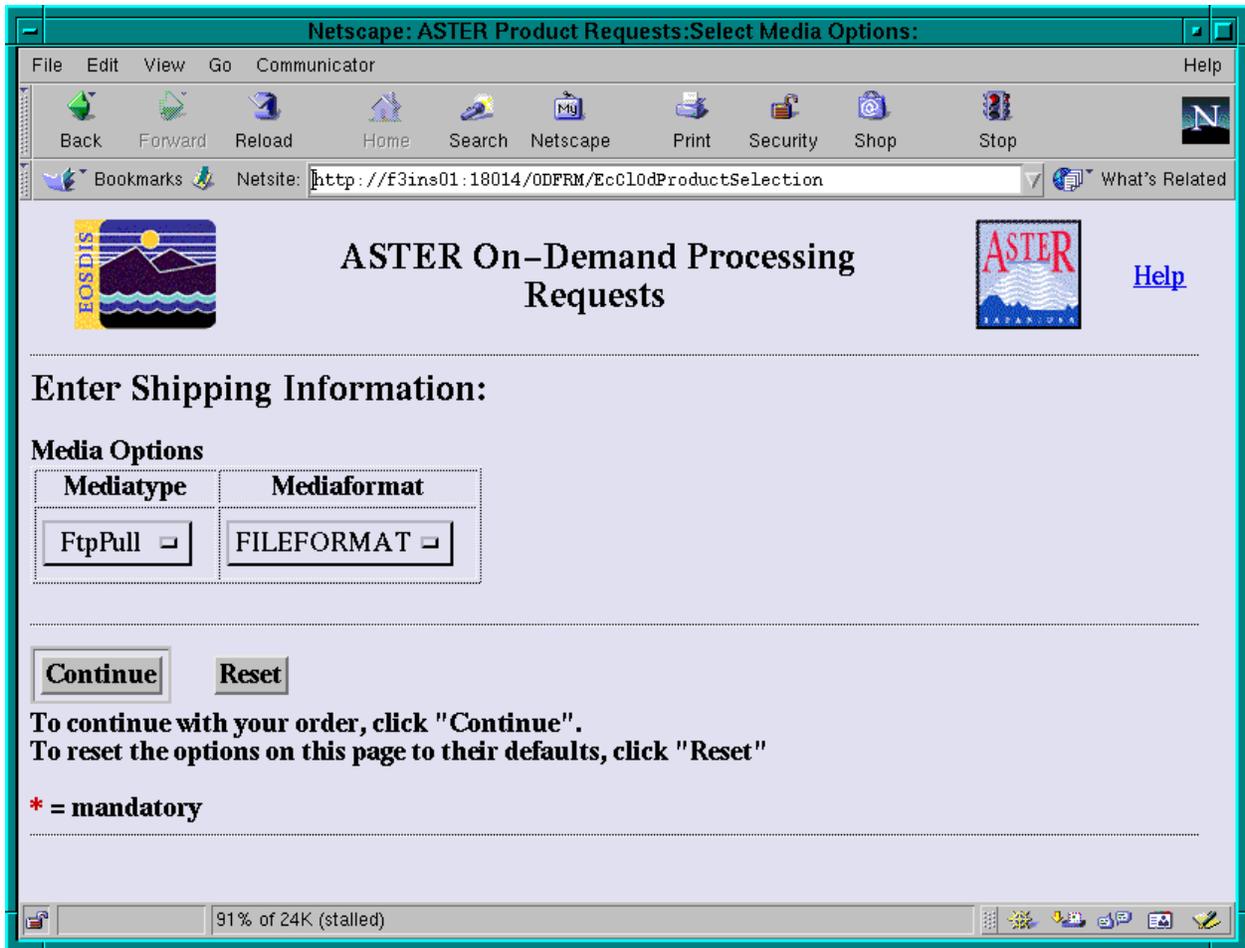


Figure 4.12.6-16. Media Options

The Media Options page requests information on the form of product delivery. After clicking the **Continue** button on the Media Options page,

- a) If **FtpPull** was selected, the user is shown a Product Request Confirmation page as shown in Figure 4.12.6-19
- b) If **FtpPush** was selected, the user is shown the FtpPush Information page as shown in Figure 4.12.6-17
- c) If **8MM, CDROM, D3, DLT, DVD, or scp** were selected, the user is shown the Shipping Information page as shown in Figure 4.12.6-18.

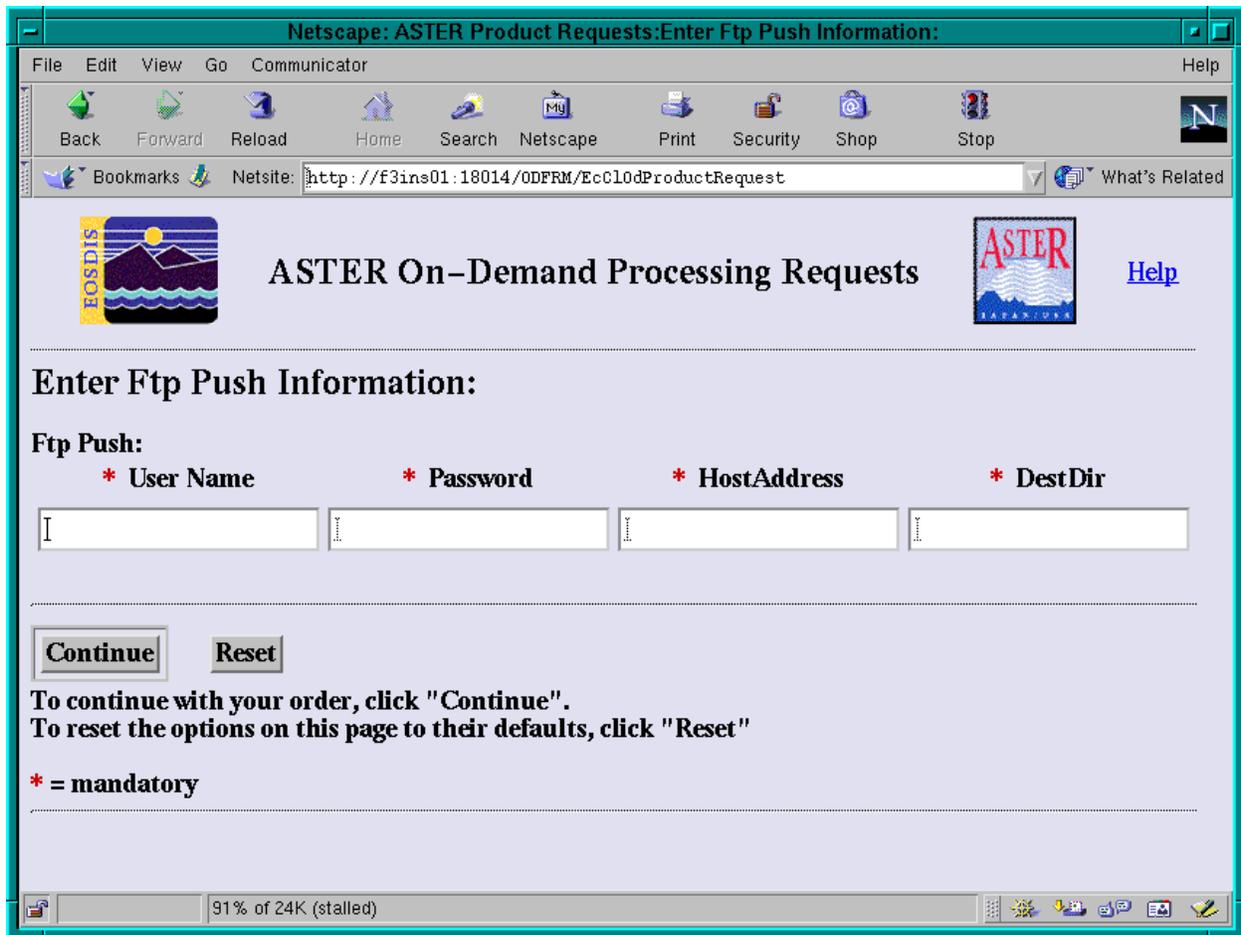


Figure 4.12.6-17. FtpPush Information

After entering the **FtpPush** Address and clicking on the **Continue** button, the Product Confirmation page in Figure 4.12.6-19 is shown.

Netscape: ASTER Product Requests:Enter Shipping Information:

File Edit View Go Communicator Help

ASTER On-Demand Processing Requests [Help](#)

Enter Shipping Information:

Shipping Address:

Use Shipping Address from the User Profile

* Full Name:

* Street Address:

* City: * State/Province: Zip/Postal code: Country:

If the Checkbox is not selected, then the Shipping Address is mandatory.
 If the Checkbox is selected, then the Shipping Address will be used from the Userprofile.

To continue with your order, click "Continue".
 To reset the options on this page to their defaults, click "Reset"

* = mandatory

91% of 23K (stalled)

Figure 4.12.6-18. Shipping Information

The **Shipping Address** is specified by hitting the **Use Shipping Address from the User Profile** button or by entering the address information fields. On clicking the **Continue** button, the Product Request Confirmation page shown in Figure 4.12.6-19 Shipping Information.



Figure 4.12.6-19. Example: Product Request Confirmation Page

By clicking on the **Submit** button of the Product Request Confirmation page, the request is sent for processing.

4.12.6.3 Required Operating Environment

ODFRM is accessible with an environment supporting a web browser such as Netscape version 4.0 or higher OR Internet Explorer version 4.0 or higher.

4.12.6.4 Databases

None.

4.12.6.5 Special Constraints

None.

4.12.6.6 Outputs

None.

4.12.6.7 Event and Error Messages

None.

4.12.6.8 Reports

None.

This page intentionally left blank.

4.12.7 Subscription Server

Subscriptions permit users to register their interest in changes to (and other events associated with) data and services using a common service function called the Subscription Service. EMD services (clients) submit a short name, version id and an action as part of a request to the Subscription Server for a subscription. To use subscriptions a Subscription Request is registered with the Subscription Service. This tool, the Subscription Server GUI, allows operators to manage Subscription Requests. The Subscription Server accepts new Subscription Requests specifying an event for initiation and the action to be taken in response to the event. It also accepts and validates the Subscription Requests, identify all subscriptions of a specified event and process any action defined in the subscription. The Subscription Server GUI uses e-mail to notify science user subscribers. Table 4.12.7-1 describes the Subscription Services functions available through the Subscription Server GUI.

Table 4.12.7-1. ECS Subscription Server Functions (1 of 2)

Operating Function	Command/Script or GUI	Description	When and Why to Use
Add subscription	Add Subscription	Allows operators to add a known subscription.	Add new subscriptions.
Edit subscription	Edit Subscription	Allows operators to edit a known subscription.	Operators can edit existing subscriptions, User ID, email text, and start date, expiration date and data associated with actions.
Filter subscription	Filter Subscription	Allows operators to filter subscriptions.	Operators can filter subscriptions by Event ID, User ID, Expire Date, or by original list of resources (All) in Subscription Information list.
Delete multiple subscriptions	Delete Multiple Subscriptions	Allows operators to delete subscriptions.	Operators can delete multiple subscriptions by Event ID, User ID, Expire Date, or by original list of resources (All) as listed in Subscription Information GUI (see figure 4.12.7-2).
Delete subscription	Delete Subscription	Operator can highlight a subscription in the main screen and delete that subscription.	Operators can delete only one subscription.
Refresh subscription	Refresh Subscription	Refresh displayed subscriptions on the main screen.	Operators can refresh all subscriptions by getting all the information from database.

Table 4.12.7-1. ECS Subscription Server Functions (2 of 2)

Operating Function	Command/Script or GUI	Description	When and Why to Use
Refresh events	Refresh Events	Refresh displayed events on the main screen event tab.	Refreshing events retrieve all current events from the Subscription server database.
Set DAAC	Set DAAC	Set the DAAC from which to retrieve subscriptions and events.	Users can set the DAAC from which to retrieve subscriptions and events.

4.12.7.1 Quick Start Using Subscription Server

The Subscription Server is started through a command line interface.

4.12.7.1.1 Invoking Subscription Server from the Command Line Interface

To execute the Subscription Server GUI from the command line prompt use:

EcSbSubServerGUIStart <mode>

<mode> is the EMD mode for the execution.

4.12.7.2 Subscription Server Main Screen

The Subscription Server GUI provides operations personnel at the DAAC the capability to manage Subscription Requests. The main screen has two tabs, one for showing available subscriptions and the other for showing existing events. Operators can use this tool to edit existing subscriptions or add new ones. Figure 4.12.7-1 shows the Subscriptions Tab screen layout.

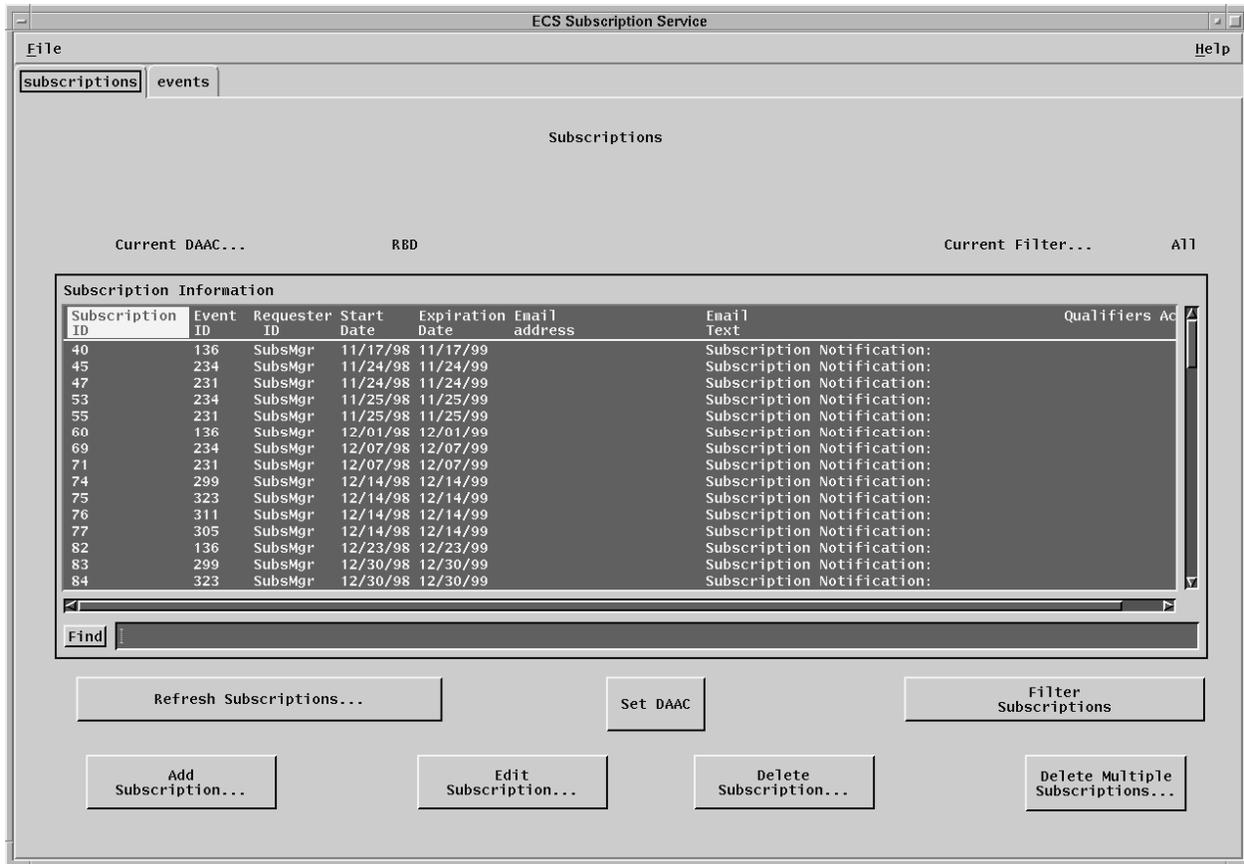


Figure 4.12.7-1. Subscription Server GUI – Subscriptions Tab

Table 4.12.7-2 describes the Subscriptions Tab fields.

Table 4.12.7-2. Subscriptions Tab Field Descriptions

Field Name	Data Type	Size	Entry	Description
Current Filter	Character	10	Display	Shows the filter selections from the Filter Subscription GUI (Figure 4.12.7-7).
Subscription ID	Character	100	Display	Unique identifier for subscriptions.
Event ID	Character	100	Display	Unique identifier for the event used to trigger this subscription.
Requestor ID	Variable character	100	Display	Identifies the user submitting the subscription.
Start Date	Date/time	8	Display	Display the Greenwich Mean Time (GMT), mm/dd/yyyy-hh:mm, the subscription was entered into the subscription server.
Expiration Date	Date/time	8	Display	Display the Greenwich Mean Time (GMT), mm/dd/yyyy-hh:mm, when the subscription expires and is removed from the system.
Email address	Variable character	100	Display	Email Address of Requestor.
Email Text	Variable character	Unlimited	Display	Display information related to subscription.
Qualifiers	Character	1	Display	Indicates by Y or N whether any qualifiers have been specified for the subscription (Figure 4.12.7-5).
Action	Character	1	Display	Indicates by Y or N whether any actions have been specified for the subscription, (Figure 4.12.7-5).
Find	Character	255	Optional	This field can be used to search for any of entries listed on subscription GUI. If the list is long, the operator can use this field to search on subscription ID, events ID, start/expiration date, email address, and email text.

A list and description of subscription events can be obtained by clicking on the **events** tab on the main screen. The **events** tab screen layout is shown in Figure 4.12.7-2. The **Find** field and button allows user input in order to locate information on a specific event and click button for results. Clicking the **Refresh Events** button will display current event information.

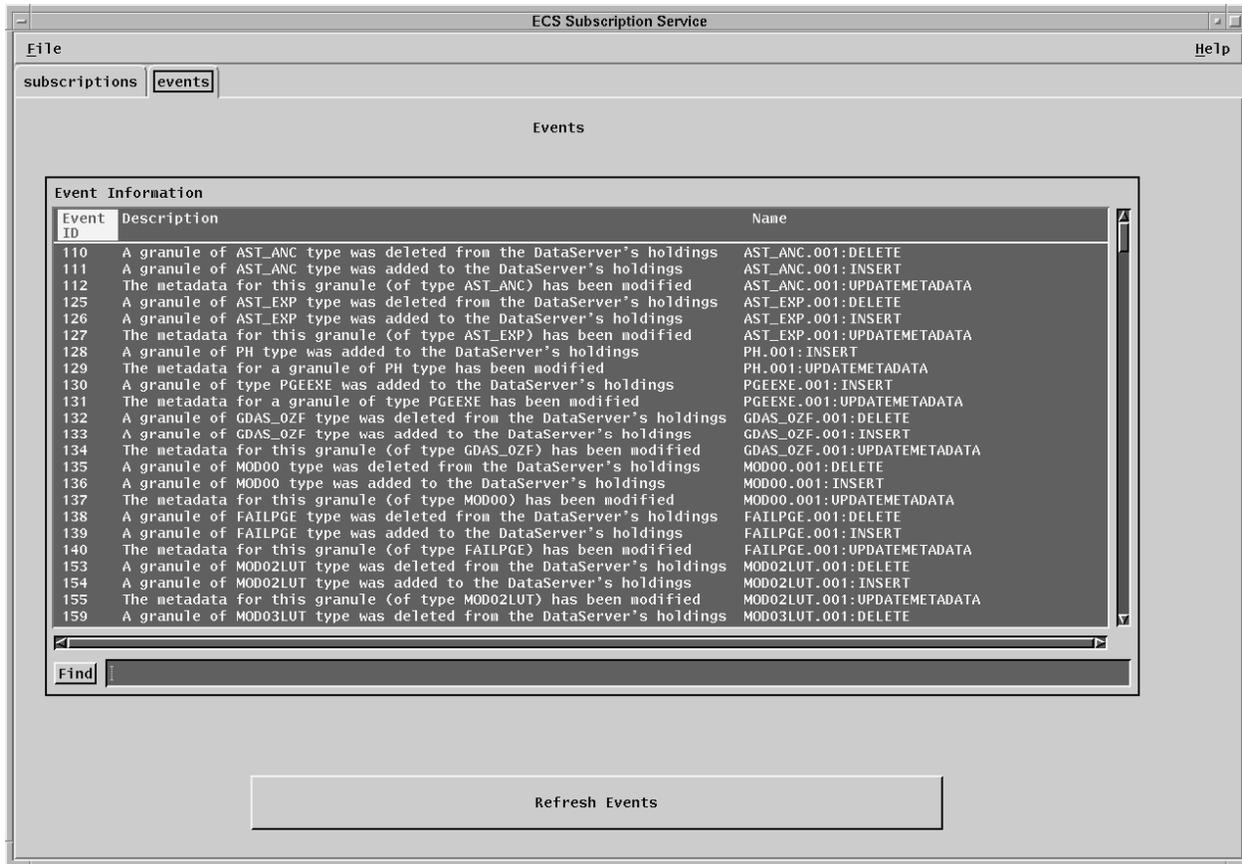


Figure 4.12.7-2. Subscription Server GUI Main Screen – Events Tab

Table 4.12.7-3 describes the **event** tab fields.

Table 4.12.7-3. Events Tab Field Descriptions

Field Name	Data Type	Size	Entry	Description
Event ID	Character	N/A	Display from database	Unique identifier for a subscribed event.
Description	Character	N/A	Display from database	Description of the event.
Name	Character	N/A	Display from database	Name of the event.

4.12.7.2.1 Add/Edit Subscription

Clicking on the **Add Subscription...** or **Edit Subscription...** button on the main screen (Figure 4.12.7-1) brings up the Add/Edit Subscription Screen shown in Figure 4.12.7-3. This screen is used to add a new subscription in response to a requester's email or telephone call, or to change an existing subscription for a requester. A Subscription Request requires the information collected on this screen; Event ID name, Event Description, requester User ID, email address

and text, start date, expiration date can be defined by using this screen. The **Browse Events** button displays the Browse Event Screen (Figure 4.12.7-4). Selecting an event in the Event Information window of the Browse Event Screen fills the **Event ID** and **Event Description** fields. The **User Profile** button is used to populate the **Email Address** field for a **User ID**. If the User Profile information is not available, the operator needs to enter the requestor's **Email** information manually. **The** Operator needs to enter the email text in the **Email Text** field and this text is used for email notification for the subscriber. **Expiration Date** for the Subscription has to be later than **Start Date**, or an error dialog box is displayed. Clicking on **the Submit** button submits the Subscription Request and shows the new subscription on the Main Screen in the Subscription Information window with the appropriate button (edit or add) selected.

The screenshot shows a window titled "Add/Edit Subscription" with the following elements:

- Event ID:** A text box containing "0" and a "Browse Events" button to its right.
- Event Description:** A text box.
- User ID:** A text box and a "user Profile" button to its right.
- Email Address:** A text box.
- Email Text:** A text box.
- Start Date:** A date picker showing "05 / 21 / 1999" with up and down arrow buttons.
- Expiration Date:** A date picker showing "05 / 21 / 1999" with up and down arrow buttons.
- Actions:** A button.
- Qualifiers:** A button.
- Submit:** A button.
- Cancel:** A button.

Figure 4.12.7-3. Add/Edit Subscription Screen

Table 4.12.7-4 lists and describes the Add/Edit Subscription GUI fields.

Table 4.12.7-4. Add/Edit Subscription Field Descriptions

Field Name	Data Type	Size	Entry	Description
Event ID	Character	N/A	Required	Unique identifier for a subscribed event.
User ID	Variable character	100	Required	Identifies the user submitting the subscription.
Email Address	Variable character	100	Required	Provide user's email address.
Email Text	Variable character	Unlimited	Required	Text the user has specified to be included in the e-mail sent each time a specified event has occurred.
Start Date	Date/time	8	Required	Display the date the subscription was entered into the subscription server. Greenwich Mean Time (GMT) is in the format: mm/dd/yyyy.
Expiration Date	Date/time	8	Required	Display the date the subscription expires and is removed from the system. Greenwich Mean Time (GMT) is in the format: mm/dd/yyyy.

4.12.7.2.2 Browse Events

To browse events, click on the Browse Events button of the Add/Edit Subscription Screen, activating the Browse Event GUI shown in Figure 4.12.7-4. This GUI provides a list of event's ID, description, and name. The Event ID, Description, and Name selected by the operator are shown in the Add/Edit Subscription Screen.

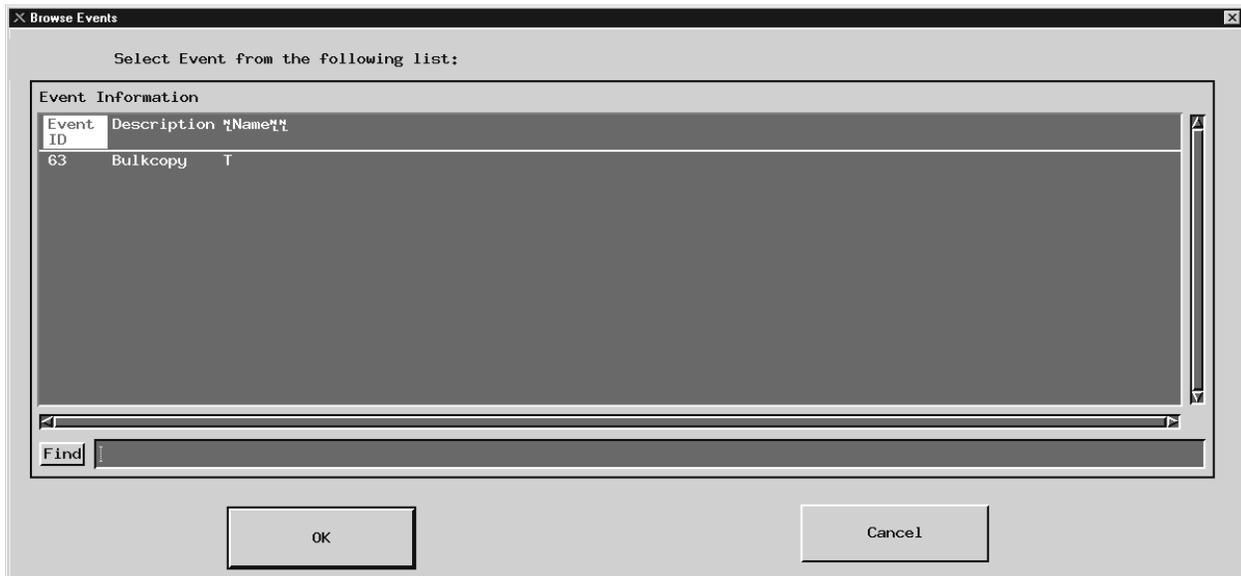


Figure 4.12.7-4. Browse Event Screen

Table 4.12.7-5 describes the fields in the Browse Event screen.

Table 4.12.7-5. Browse Event Field Descriptions

Field Name	Data Type	Size	Entry	Description
Event ID	Character	N/A	Display from database	Unique identifier for a subscribed event.
Description	Character	N/A	Display from database	Description of the event.
Name	Character	N/A	Display from database	Name of the event.
Find	Character	255	Optional	This field can be used to search for any of entries listed on browse event GUI. If the list is long, operator can use this field to search on name, description, and event ID.

4.12.7.2.3 Actions

Clicking on **Actions** from the Add/Edit Subscription GUI brings up the Actions Screen, Figure 4.12.7-5. The operator can choose either FTP Push, FTP Pull, or 8MM tape as an action to be performed in addition to the email notification the subscriber wants to occur as the consequence of the subscribed event. **Ftp Push** selects FTP Push as an action to be performed, **Ftp Pull** selects FTP Pull as an action to be performed, and **8 MM tape** selects the generation and shipping of 8MM tape as an action to be performed when the subscribed event occurs. If **Ftp Push** is selected, the operator needs to fill in all the fields as described in Table 4.12.7-6. The password is entered twice to verify the user has typed it correctly. For security reasons, the password is encrypted when the subscription is sent to the Subscription Server. If **Ftp Pull** is selected, there is no other information the operator needs to fill in. In the case of selecting a 8MM tape, the operator only needs to fill in the user profile. **OK** saves all the information and the screen returns to the Add/Edit Subscription Screen.

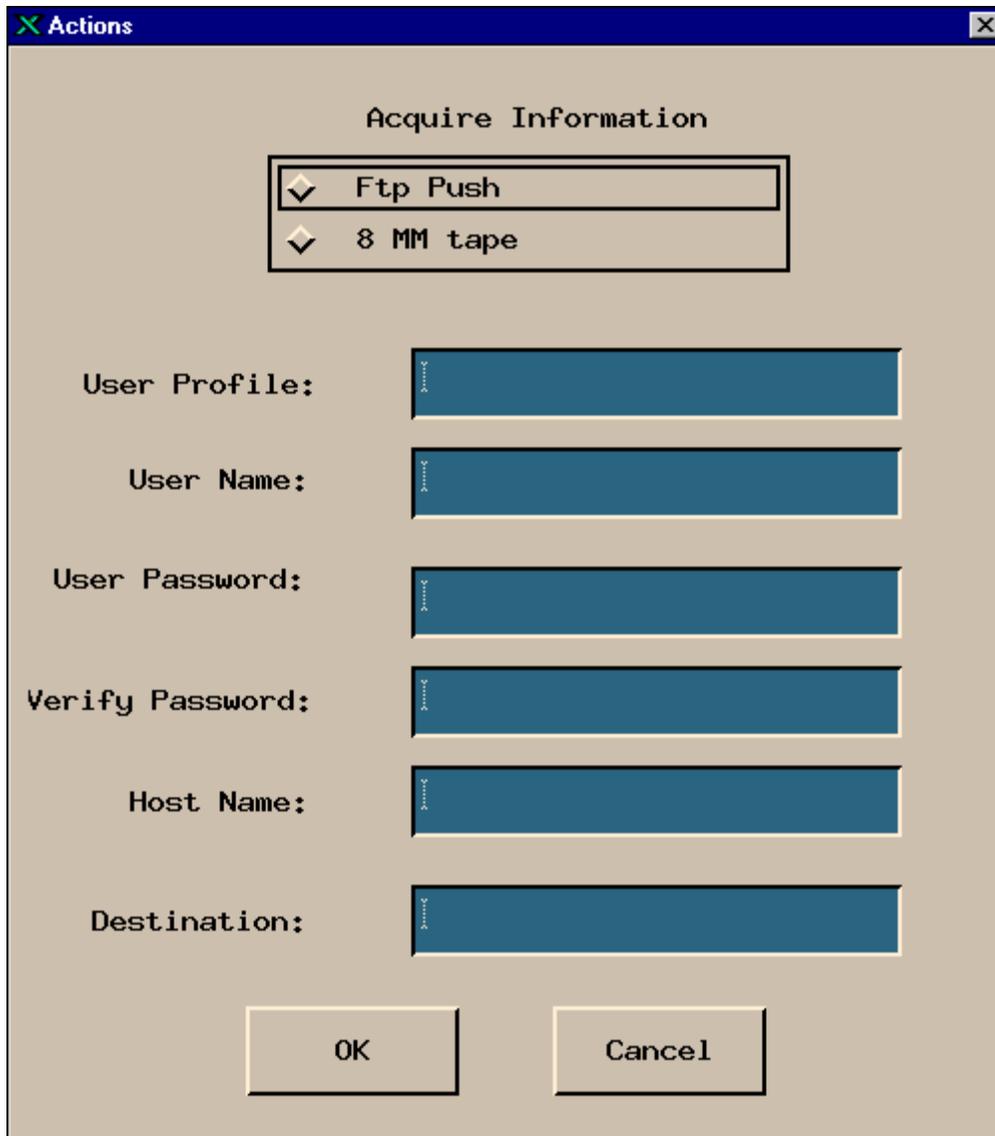


Figure 4.12.7-5. Actions Screen

Table 4.12.7-6 describes the fields in the Actions screen.

Table 4.12.7-6. Actions Field Descriptions

Field Name	Data Type	Size	Entry	Description
Ftp Push	N/A	N/A	Required for Ftp push only	It selects the ftp push as an action to be performed when the subscription event occurs.
Ftp Pull	N/A	N/A	Required for Ftp pull only	It selects the ftp pull as an action to be performed when the subscription event occurs. When notified, the user needs to pull the data, via ftp, from a common user pull area.
8 MM tape	N/A	N/A	Required for 8mm tape only	It selects the 8 MM tape as an action to be performed when the subscription event occurs. The tape is shipped to the subscriber.
User Profile	Variable character	255	Required (only if 8 MM Tape is selected by operators)	Display the user profile. This field must be completed if operator selects 8 MM tape as an action to be performed when the subscription event occurs.
User Name	Variable character	100	Required for Ftp push only	Identify the user who submitted the subscription or event.
User Password	Variable character	100	Required for Ftp push only	Specifies unique identifier of a registered user.
Verify Password	Variable character	100	Required for Ftp push only	Second entry of the user password.
Host Name	Variable character	100	Required for Ftp push only	Specify the host to which data is to be transferred.
Destination	Variable character	Unlimited	Required for Ftp push only	Specifies the site to which data is to be transferred.

4.12.7.2.4 Qualifier

Clicking on **Qualifier** from the Add/Edit Subscription Screen brings up the Qualifiers Screen, Figure 4.12.7-6. This screen shows the qualifiers name associated with the selected event. First, the operator must select a qualifier and then an appropriate operator and value. Clicking on the **Add to the list** button adds the selected operation and value of that qualifier to the qualifier list. The operator can add multiple qualifiers to the information list. **OK** saves all the information and the operator returns to the Add/Edit Subscription Screen.

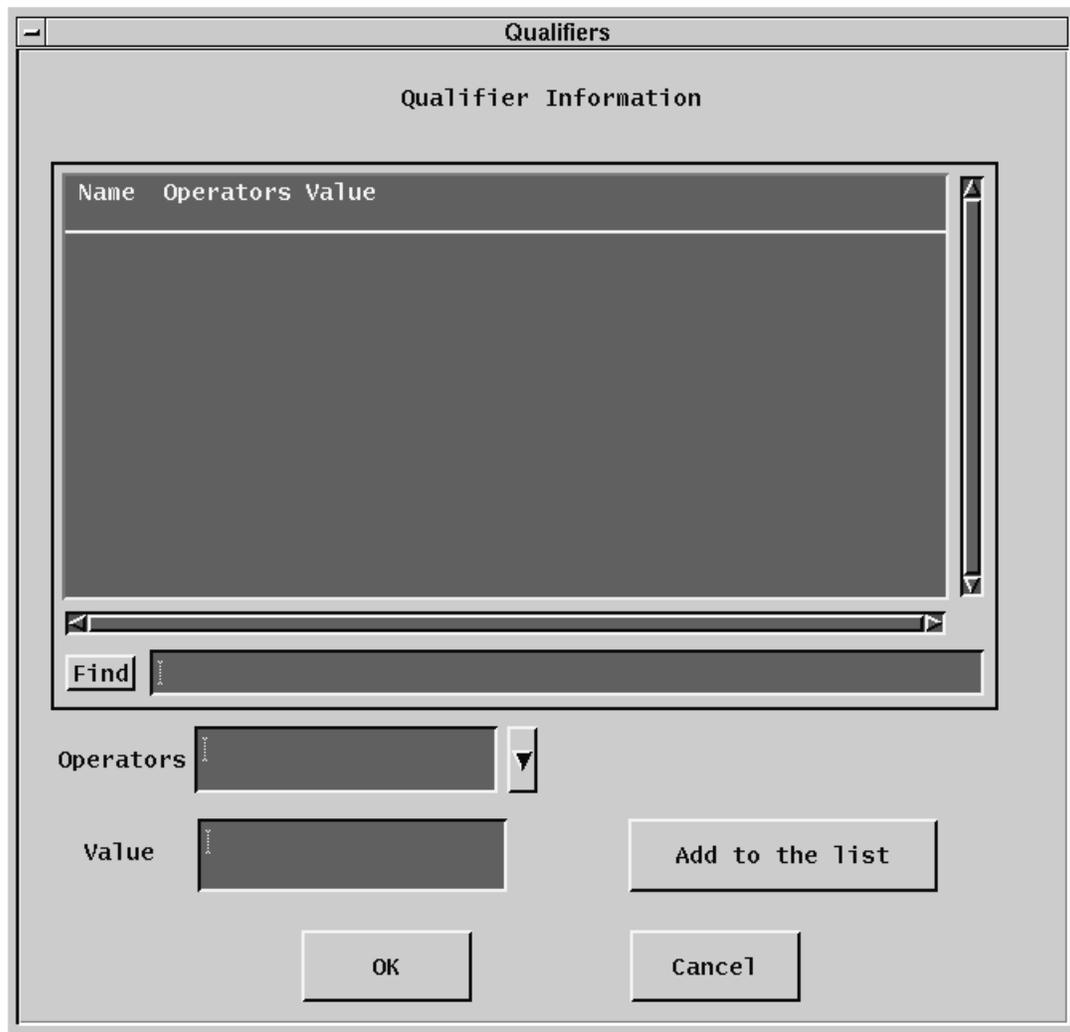


Figure 4.12.7-6. Qualifiers Screen

Table 4.12.7-7 describes the fields in the Qualifiers screen.

Table 4.12.7-7. Qualifiers Field Descriptions

Field Name	Data Type	Size	Entry	Description
Name	Character		Display from database	Qualifier name.
Find	Character	N/A	Typed in by operator (optional)	This field can be used to search for any entries listed in the Qualifiers database.
Operators (data)	Character	N/A	Selected from list	A list of operators (data) (i.e., ==, <, >, !=, =) are provided in a pull down list. Operators (computer) must select an appropriate operator (data), which delimits the value entry and enter value for the qualifier.
Value	Integer	N/A	Typed in by operator	Identifies the specific instance of a subscribed event.

4.12.7.2.5 Filter Subscriptions

Clicking on the **Filter Subscriptions** button on the main screen brings up the Filter dialog Screen shown in Figure 4.12.7-7. This screen allows operators to filter subscriptions by Event ID, User ID, Expire Date, or by original list of resources (All) in the Subscription Information list of the main screen. The operator must select one of the fields in the box. Selection is indicated by an outline around the name. To the right of the outlined selection is an input box to enter the value of the filter. The **OK** button returns to the Main Screen and displays the selected Filter in the upper left part.

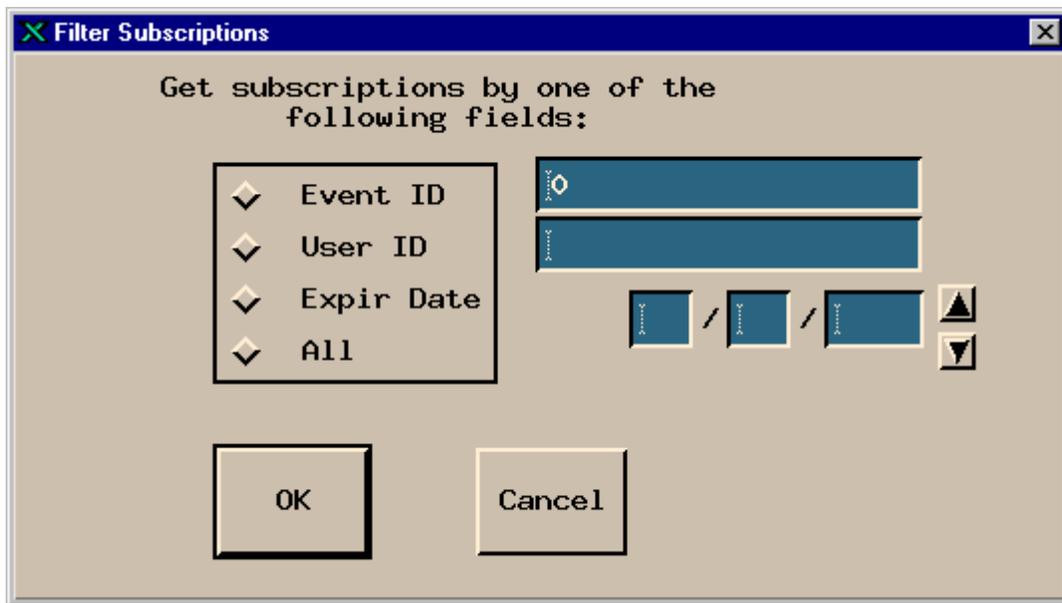


Figure 4.12.7-7. Filter Subscription Screen

Table 4.12.7-8 describes the fields in the Filter Subscription screen.

Table 4.12.7-8. Filter Subscription Field Descriptions

Field Name	Data Type	Size	Entry	Description
Event ID	Long integer	N/A	Optional	Identifier of the event.
User ID	Variable character	100	System generated	Identity of the user who submitted the subscription.
Expire Date	Date/time	2/2/4	Optional	Display the Greenwich Mean Time (GMT), mm/dd/yyyy, the subscription expires and is removed from the system.
All	N/A	N/A	Optional	Selects the original list of resources including Event ID, User Id, and Expire Date.

4.12.7.2.6 Delete Multiple Subscriptions by One of the Following Fields

Clicking on the **Delete Multiple Subscription** button on the main screen brings up the Delete Subscriptions dialog shown in Figure 4.12.7-8. This screen allows operators to delete subscriptions by Event ID, User ID, Expire Date, or by original list of resources (All) as listed in Subscription Information list of the main screen. The operator must select one of the fields in the box. Selection is indicated by an outline around the name. To the right of the outlined selection is an input box to enter the value of the filter. **OK** saves all the inputs and returns to main screen.

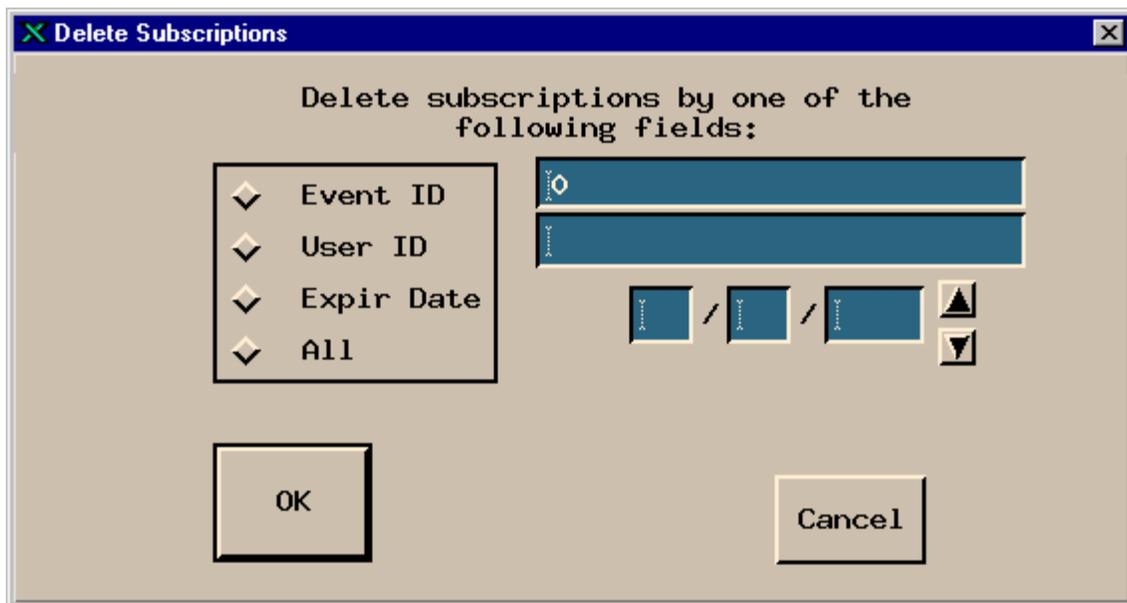


Figure 4.12.7-8. Delete Subscriptions Dialog

Table 4.12.7-9 describes the fields in the Delete Subscriptions screen.

Table 4.12.7-9. Delete Subscriptions Field Descriptions

Field Name	Data Type	Size	Entry	Description
Event ID	Long integer	N/A	Optional	Identifier of the event.
User ID	Variable character	100	System generated	Identify the user who submitted the subscription.
Expire Date	Date/time	2/2/4	Optional	Display the date the subscription expires and is removed from the system. Greenwich Mean Time (GMT) is in the format: mm/dd/yyyy.
All	N/A	N/A	Optional	Selects the original list of resources including Event ID, User ID, and Expire Date.

4.12.7.2.7 Refresh Subscription

Clicking on the **Refresh Subscriptions....** button on the main screen (Figure 4.12.7-1) redisplay the screen reflecting any changes made since the last refresh.

4.12.7.2.8 Refresh Events

Clicking on the **Refresh Events** button on the main screen event tab (Figure 4.12.7-1) redisplay the screen reflecting any changes made since the last refresh.

4.12.7.3 Required Operating Environment

For information on the operating environment, tunable parameters and environment variables of Subscription Server refer to the 920-TDA-022 “Custom Code Configuration Parameters” documentation series.

4.12.7.3.1 Interfaces and Data Types

The Subscription Server GUI exchanges data of various types through interfaces within and external to EMD. Table 4.12.7-10 lists the Subscription Server’s interfaces for Release 7.

Table 4.12.7-10. Interfaces Protocols

Interface	Type of Primary Interface Protocols	Type of Backup Interface Protocols	Comments
Subscription Server GUI to Subscription Server	Asynchronous requests/responses	None	The GUI is separate from the Subscription Server. The GUI acts as a client to the Subscription Server.
Subscription Server GUI to other EMD components	Synchronous requests/responses	None	The Subscription Server GUI retrieves User Profiles from the MSS Registered User server.
Subscription Server to other EMD components	Asynchronous requests/responses		The Subscription Server interfaces with these components as peer-to-peer: <ul style="list-style-type: none"> 1. SDSRV: Register insert event with qualifiers 2. Subscriber (CLS): Submit subscription with qualifiers and values and receive notifications from subscription server 3. Action Provider: Receive action request from subscription server and returns status and results

4.12.7.4 Databases

The Subscription Server accesses several EMD databases. Table 4.12.7-11 indicates the document for the individual databases used in the Subscription Server. The operator may have to identify individual data fields by examination of the descriptions in the documentation. Some data can be directly accessible through the database software.

Table 4.12.7-11. Subscription Server Database References

CI	Database documents for Release 7
DDIST	<i>Data Distribution Database Design and Schema Specifications, 311-CD-101</i>
MCI (MSS)	<i>Management Support Subsystem Database Design and Schema Specifications, 311-CD-627</i>
PLANG and PRONG (PDPS)	<i>Planning and Data Processing Subsystem Database Design and Schema Specifications, 311-CD-623</i>
SDSRV	<i>Science Data Server Database Design and Schema Specifications, 311-CD-624</i>

4.12.7.5 Special Constraints

None.

4.12.7.6 Outputs

The Subscription Server displays information on the various screens described above, sends the indicated E-mail notifications, and produces error messages.

4.12.7.7 Event and Error Messages

The Subscription Server GUI issues both status and error messages to indicate a problem has occurred, and if the problem needs correction by the operations staff. Error messages are listed in Appendix A.

4.12.7.8 Reports

None.

4.12.8 Batch Insert Utility

The Batch Insert Utility allows operators to insert granules residing in or outside of (non-ECS granules) the ECS archive into the Data Pool. It is a command line utility, which queues the granules up for dispatch by the Data Pool Action Driver (DPAD) for insertion by the Data Pool Insert Utility (DPIU). It accepts either a list of ECS granule identifiers or a list of non-ECS file names. A label identifying a batch of granules is specified as a command-line parameter so that operators can monitor a batch with the Data Pool Monitoring GUI. Thematic collections are also supported so the granules to be inserted can be linked to a theme.

Fault recovery capability is also supported, preventing inserts of duplicate actions inserted from a previous run.

Input is provided via input file or standard input.

4.12.8.1 Quick Start using the Batch Insert Utility

Enter the following command to start the Batch Insert Utility:

```
> EcDIBatchInsert.pl mode -ecs | -nonecs [ -file pathname ]  
[ -theme "theme_name" ] [ -label label ]  
[ -rpriority priority ] [ -rperiod period ]  
[ -dpriority priority ] [ -mdonly ]  
[ -verbose ]
```

Table 4.12.8-1 provides a description of these command line parameters.

Table 4.12.8-1. Command Line Parameters of the Batch Insert Utility (1 of 2)

Parameter Name	Description
<i>mode</i>	An input parameter specifying the mode of operation. This must be the first parameter passed, and it must be a valid, existing Data Pool mode with a format like OPS or TS1.
-ecs	Indicates that ECS granules are inserted. The input file (see -file) (or standard input) consists of a list of granule ids.
-nonecs	Indicates that non-ECS granules are inserted. The input file (see -file) (or standard input) consists of a list of XML file pathnames.
-file <i>pathname</i>	The pathname of the input file containing a list of either granule ids (if -ecs is specified) or XML pathnames (if -nonecs is specified).
-theme " <i>theme_name</i> "	Theme name to be associated with granules. <i>theme_name</i> is a character string and must match an existing theme name in the Data Pool inventory. Enclose it in quotes if embedded blanks or other special characters are part of the name.

Table 4.12.8-1. Command Line Parameters of the Batch Insert Utility (2 of 2)

Parameter Name	Description
-label <i>label</i>	An identifying label to be linked to the batch of granules being inserted. <i>label</i> is a character string. If no batch label (-label) is supplied, the label is set to the first sixteen characters of the input filename (excluding the directory name). If standard input is used in lieu of an input file, a batch label must be specified with the -label option.
-rpriority <i>priority</i>	A retention priority to be applied to all granules being inserted. $255 \geq \textit{priority} \geq 1$
-rperiod <i>period</i>	Number of days to retain all granules being inserted in inventory.
-dpriority <i>priority</i>	A dispatch priority to be applied to all granules being inserted. $255 \geq \textit{priority} \geq 1$
-mdonly	Flag indicating only metadata files are inserted for all granules being inserted.
-verbose	Directs the utility to run using verbose option. Default is non-verbose.

Mandatory parameters include *mode* and either -ecs or -nonecs. *Mode* must be the first parameter supplied.

4.12.8.1.1 Batch Insert Utility Commands

Below are some examples for invoking this utility:

1. `EcDlBatchInsert.pl OPS -ecs -file /home/fred/ECSMODISgranules1 -verbose`

Adds actions to action insert queue for all ECS granules specified by granule ids in the input file. No -label parameter specified, so label is formed from first 16 characters of input filename (ECSMODISgranules). Runs in the verbose mode.

2. `cat /home/fred/ECSfile1 | EcDlBatchInsert.pl OPS -ecs -label MODIS_batch1 -verbose`

This example is similar to example 1 but using standard input instead of -file. Note that the -label parameter must be supplied since filename is not accessible to the utility.

3. `EcDlBatchInsert.pl OPS -nonecs -file /home/fred/nonECSVolcanogranules
-label Chig_volcano -theme "Chiginagak Volcano 2002"`

Adds actions to action insert queue for all non-ECS granules specified by XML pathnames in the input file. All granules are linked with theme name of "Chiginagak Volcano 2002" in inventory. Runs in the non-verbose mode.

4. `EcDlBatchInsert.pl OPS -ecs -file /home/fred/ECSMODISgranules1 -verbose -mdonly`

This example is similar to example 1 but only metadata files are inserted.

5. `EcDlBatchInsert.pl OPS -ecs -file /home/fred/ECSMODISgranules1 -verbose -rpriority
200`

This example is similar to example 1 with retention priority of granules to be set to 200 in the inventory.

```
6. EcDlBatchInsert.pl OPS -ecs -file /home/fred/ECSMODISgranules1 -verbose -rpriority
   200 -rperiod 10 -dpriority 5
```

This example is similar to example 1 with retention priority of granules to be set to 200 in the inventory, retention period to last 10 days, and dispatch priority set to 5.

4.12.8.2 Batch Insert Utility Main Screen

The Batch Insert Utility does not have a main screen. It has a command line interface only.

4.12.8.3 Required Operating Environment

The Batch Insert Utility runs on Sun platforms.

4.12.8.4 Databases

Table 4.12.8-2 lists the supporting products this tool depends upon to function properly.

Table 4.12.8-2. Interface Protocols

Product Dependency	Protocols Used	Comments
Data Pool database	SQL	Via SQL server machines
Perl DBI	DBD::Sybase	Requires proper install of base-lined version of Perl.

If a Sybase error occurs, you are most likely to see the actual Sybase error string displayed on the screen and in the log. Some errors can be the database server is unavailable, the connection to the database was dropped, or there was an error executing the stored procedure. In the event of a Sybase-sourced error, the utility immediately stops running.

In the event that a connection to the Data Pool database or Science Data Server database cannot be established, the utility may repeatedly attempt to connect to the database, depending on how the configuration file was set (see Section 4.12.8.4.1). If, for example, NUM_RETRIES was set to 5 and SLEEP_SEC was set to 10, this means it tries to connect 5 times, and waits 10 seconds before each attempt – a total of 50 seconds if all attempts are unsuccessful.

4.12.8.4.1 Configuration File Format – EcDlBatchInsert.CFG

The “config” file contains vital details about how to connect to the Sybase database. Without this file, the utility cannot run. The “config” file must be a single-entry plain text ASCII file, which has the following format:

```
SYB_USER = EcDlBatchInsert
SYB_SQL_SERVER = <string>
SYB_DBNAME = <string>
PGM_ID = <string>
NUM_RETRIES = <integer>
SLEEP_SEC = <integer>
```

Table 4.12.8-3. Individual Parameter

Parameter Name	Description
SYB_USER	The user name for the Sybase connection.
SYB_SQL_SERVER	The name of the SQL server for this Sybase connection.
SYB_DBNAME	The name of the Data Pool database you intend to connect to
PGM_ID	Program ID used for connecting to the Data Pool database.
NUM_RETRIES	The number of times the utility attempts to connect to the database before exiting. The recommended default is 5.
SLEEP_SEC	The number of seconds the utility waits ('sleep') between connection attempts. The recommended default is 10.

4.12.8.5 Special Constraints

The Batch Insert Utility runs only if the Data Pool and Science Data Server database servers are running and if the databases are available. It also assumes the stored procedures are present.

4.12.8.6 Outputs

Output of events and errors is always appended to a single log file.

4.12.8.7 Event and Error Messages

Events and error messages are written to the log file. A usage message is displayed to the screen when command-line parameters are incorrectly specified.

The utility produces a log file called EcDIBatchInsert.log in the /usr/ecs/<mode>/CUSTOM/logs directory. If this log file already exists, the new information is automatically appended. If there is no existing log file by this name, a new log file with this name is automatically created.

Since the log file may grow to a considerable size after constant use, it is recommended that it be saved off into a separate file from time to time for maintainability.

4.12.8.8 Reports

None.

4.12.9 Data Pool Cleanup Utility

The Data Pool Cleanup utility provides a mechanism by which the ECS Operations Staff can remove expired granules and their associated metadata and browse files from the Data Pool disks and corresponding Data Pool database inventory. Qualification of a granule for cleanup is based on two criteria: expiration date/time and retention priority. Both are necessary in selecting which granules are to be removed from the Data Pool. Several enhancements have been made to the "cleanup" capability as part of Synergy IV release and they are listed below:

1. Capability to clean up ECS data in the Data Pool by file option consisting of geoids (Datatype:Shortname.Versionid:dbID entries)
2. Capability to clean up ECS data in the Data Pool scheduled for deletion through the Science Data Server in addition to cleaning up other data pool data dictated by the command line criteria such as expiration date and retention priority.
3. Capability to only clean up ECS data in the Data Pool scheduled for deletion through the Science Data Server.
4. The cleanup utility shall set the freeSpaceFlag in the DIFileSystems table if the amount of space that was cleaned up exceeds the operator configured limit for that file system.
5. The Cleanup utility shall transparently cleanup the Data Pool when collections reside on different file systems.
6. The utility shall skip the cleanup of collections on file systems that are marked unavailable.
7. The utility shall log the collections skipped during cleanup because of file system unavailability.
8. The cleanup utility shall transparently validate the Data Pool across file systems.
9. The cleanup utility shall skip the validation of collections that reside on unavailable file systems.
10. The cleanup utility shall log the collections skipped for validation if they reside on an unavailable file system.
11. Capability to clean up the "Most Recent Data Pool" utility files prefaced with naming convention *DPRecentInserts* that exist in the top level and collection-level directories.
12. Capability to run in pre-delete, delete DPL only or delete DPL & ECHO modes.

4.12.9.1 Using the Data Pool Cleanup Utility

The Data Pool cleanup utility is started using the following parameters:

1. For a "cleanup only" run:
 - a. predelete/finishdelete run sequence

In this case, two runs are required to perform a cleanup, the first with **-echomode predelete** and the second with **-echomode finishdelete**. For example:

```
EcDlCleanupDataPool.pl <mode> -echomode predelete [-noprompt] [-offset  
<offset # of hours>] [-limit <priority limit>] [-theme <themeName>] | [-  
file <fileName>] | [-geoidfile <geoidFileName> | -ecsgrandel
```

and

```
EcDlCleanupDataPool.pl <mode> -echomode finishdelete [-noprompt]
```

Note: No other parameter can be specified with the **finishdelete** parameter, with the exception of the **noprompt** parameter.

b. deleteall run

Only one cleanup run is required with **-echomode deleteall**. For example:

```
EcDlCleanupDataPool.pl <mode> -echomode deleteall [-noprompt] [-offset  
<offset # of hours>] [-limit <priority limit>] [-theme <themeName>] | [-  
file <fileName>] | [-geoidfile <geoidFileName> | -ecsgrandel
```

c. theme cross-reference run

For example:

```
EcDlCleanupDataPool.pl <mode> -themexref <themeName> [-noprompt]
```

Note: No other parameter can be specified with the **themexref** parameter, with the exception of the **noprompt** parameter.

2. For a "validation only" run:

```
EcDlCleanupDataPool.pl <mode> -orphan | -phantom [-collgroup <groupList>] [-  
maxorphanager <age in # of days>] [-nofix]
```

OR

3. For a "cleanup followed by validation" run:

Specify a command line option **-cleanvalidate** along with the options described in 1 and 2 above.

There are various command line parameters that are used in combination with each other. Table 4.12.9-1 provides a description of these parameters.

Table 4.12.9-1. Command Line Parameters¹ (1 of 3)

Parameter Name	Required	Description
noprompt	No	Suppresses all confirmations and warnings normally displayed on the screen. Requires no value. May be used with any other option.
Parameters specific to performing cleanup		
echomode	Yes (for cleanup and clean/validate, not for validation only)	Specifies the method by which the Cleanup utility will report deletion candidates to the ECS Clearing House (ECHO). The echomode parameter can take 3 values: predelete , finishdelete or deleteall . predelete signifies that the cleanup utility will only build the list of items to clean up from the Data Pool and will report them to ECHO through the EcBmBulkURL utility. No actual data will be cleaned up from the disks or database inventory using predelete . A value of finishdelete signifies that the cleanup utility will now delete all of the data that was last found during a run with the predelete parameter. The difference is that the EcBmBulkURL utility will not be invoked because this run is to perform the actual cleanup of the database inventory and disks of what was presumably reported to ECHO during the previous run. A third value of deleteall will indicate that the Cleanup utility should build its list of items to cleanup, actually clean them up and to <i>also</i> notify ECHO via the EcBmBulkURL utility. deleteall does not allow for a time lag between Cleanup deleting the granules and ECHO performing its own clean up of URLs. The predelete/finishdelete run sequence can be viewed as a logical run done in two parts. The normal sequence will be to run Cleanup first with predelete and then with finishdelete . Note that an echomode parameter with a value of finishdelete can only be specified by itself since the list of items to delete will have already been determined by the previous run. If a predelete run is performed, the subsequent run <i>must</i> specify finishdelete in order to perform the actual deletions. This requirement is enforced by the utility to avoid operator error and end-user confusion. The values of predelete and deleteall may be used with each of the other parameters specific to performing Cleanup except themexref (see themexref parameter description).
offset	No	Specifies hours before (negative) or after (positive) midnight of the previous day from which to delete. Defaults to zero. (Some examples: -offset 5 would delete all granules which had expired as of 5 AM of the current day; -offset -5 would delete all granules which had expired as of 7 PM yesterday -offset 72 would delete all granules which will be expiring in 72 hours measured from the previous day's midnight).

¹ New parameters for this functionality are shown in **bold**.

Table 4.12.9-1. Command Line Parameters (2 of 3)

Parameter Name	Required	Description
limit	No	Specifies limiting value used for determining which granules will be deleted. Will delete all granules with priority less than or equal to the specified limit. Must be within the range 1–255, 1 being the lowest priority and 255 being the highest priority. Defaults to value specified in configuration file.
file	No	Specifies name of file containing Data Pool granule ids to be deleted. May not be used with any other options other than the <i>noprompt</i> option.
geoidfile	No	Specifies the name of the file containing geoids which are a combination of science type, esdt short name and version id and ECS Science Data Server database id. Granules in this file whose ECS id match those in the data pool are candidates for data pool cleanup if specified by this option. May not be used in conjunction with any other options other than the <i>noprompt</i> option. Note that the geoid file can contain science granules as well as non-science granule because the science data server may delete these type of granules. The input value for this parameter is logically defined to be the output of any Science Data Server phase 1 (EcDsBulkDelete.pl) granule deletion run. This will cause the Data Pool cleanup utility to clean up any Science Data Server granules found in the geoid input file to be removed from the Data Pool database.
ecsgrandel	No	Indicates that only granules removed in the ECS system from the Science Data Server inventory will be removed from the data pool if they exist. This option may not be used in conjunction with any other options other than the <i>noprompt</i> option. No other cleanup will occur.
theme	No	Specifies the name of a theme for which cleanup is to be performed. The Cleanup Utility will clean up granules that would otherwise qualify for cleanup only if the granules are associated with that theme, and remove the granules entirely if they are not associated with any other theme, otherwise only remove the cross references with that theme. The theme name must be enclosed in quotes ("").
themexref	No	Specifies the name of a theme all cross-references of which are to be removed from the Data Pool inventory. This option is specified to remove the theme cross references only. It does not remove any granules. This command line option cannot be used with any other options other than the <i>noprompt</i> option. The theme name must be enclosed in quotes ("").

Table 4.12.9-1. Command Line Parameters (3 of 3)

Parameter Name	Required	Description
Parameters specific to performing validation		
orphan	No	Specifies that Data Pool validation be performed by performing orphan checking. The Data Pool inventory validation function will remove all orphan files and links from the Data pool disks unless <i>nofix</i> option was specified. (In order to perform validation either <i>orphan</i> or <i>phantom</i> or both must be provided on command line.)
phantom	No	Specifies that phantom checking be performed. The Data Pool inventory validation function will remove granules affected by any phantom from the inventory and all its remaining files and links from the Data pool disks unless <i>nofix</i> option was specified. (In order to perform validation either <i>orphan</i> or <i>phantom</i> or both must be provided on command line.)
maxorphanage	No	Specifies the maximum orphan age in days. The value specified must be greater than or equal to 3 days. The Data Pool inventory validation function will consider only those files on disk as orphans whose age is equal to or larger than the maximum orphan age specified. If this parameter is omitted, a default value specified in the configuration file will be used.
nofix	No	Specifies that a Data Pool validation be performed, but do not attempt to reconcile the discrepancies found. The validation results will be logged.
collgroup	No	Limit the Data Pool validation to the collection group(s) specified. Single or multiple collection groups can be specified on the command line. Multiple collection groups if provided must be separated by commas, with the string enclosed in double quotes ("), e.g. "MOAT, ASTT". By default, all collection groups in the Data Pool inventory will be included in the validation if this option is not specified.
cleanvalidate	No	Specifies that a cleanup run should be followed by a validation run.

The Data Pool Cleanup utility performs the following as part of the "cleanup" processing:

- Removes all data pool granules along with the associated browse files (if no other granules are cross-referenced to them) and the browse links that meet the specified cleanup criteria, from both the Data Pool inventory and the disks. This occurs when the echomode parameter has a value of **finishdelete** or **deleteall**.
- Removes all recent insert files prefixed with *DPRRecentInsert* that are older than 7 days. These files are found in `/datapool/<fs1>/<mode>/user/` and `/datapool/<fs1>/<mode>/user/<group>/<esdt>`.

- Exports a list of deleted granules for ECHO accessibility by invoking an external utility, `EcBmBulkURLStart` if the **echomode** parameter is set to **predelete** or **deleteall**. If there are granules that are being deleted that qualify for ECHO export, this utility generates an XML file containing a list of those granules and stores it in the `/datapool/<fs1>/<mode>/user/URLEExport` directory for files that are FTP pulled and FTP pushes files when Bulk URL is configured to FTP Push the data to ECHO. If the Data Pool cleanup utility is run with **echomode finishdelete** then the `EcBmBulkURLStart` utility is not called.
- Removes all HEG conversion files associated with the HEG order IDs that have the status of "DONE" or "FAILED" and a timestamp older than a certain cleanup age. The HEG order IDs are provided in the `DIOrder` table and the cleanup age is specified by the "HEGCleanupAge" parameter in the `DIConfig` table. The HEG conversion files for each order ID are stored in the `/datapool/<mode>/user/downloads/<orderID>` directory. (HEG orders and conversion files are generated when end users request HEG-converted data via Data Pool Web Access.)

(Note that the "URLEExport" subdirectory as well as the "downloads" subdirectory are created at the time of Data Pool installation, owned by user "cmshared" with access permissions set to 775. The Cleanup utility does not create these subdirectories.)

The Data Pool Cleanup utility performs the following as part of the "validation" processing:

- Validates the Data Pool inventory and disk content by checking for the existence of orphans and/or phantoms and removing or just logging them depending on the command line options specified.

The Cleanup Utility has the ability to continue from where it stopped in the event of interruption. Additionally, to alleviate database contention, it allows only one instance of itself to execute concurrently. The Cleanup Utility also provides the **noprompt** option to suppress operator prompts/messages.

In normal operations, the Cleanup Utility will be run once a day as a cron job as a "cleanup only" run executing with **-echomode predelete**. This will build the list of cleanup candidates (based on the expiration date and retention priority) that will be reported to ECHO as those which will be deleted in the next run of cleanup. Also, those granules that have been entered in the Science Data Servers deleted granules table will be reported. On a subsequent run within the same 24-hour period, the cleanup utility will be run with **-echomode finishdelete** to perform the actual cleanup processing that was reported to ECHO in the **predelete** mode. A validation run can be time consuming and should not be run as often, since it potentially involves the checking of all files in the entire Data Pool inventory against those on the Data Pool disk in order to find and remove the discrepancies. It is advised that the validation function be run using *collgroup* option whenever possible to limit the validation to the user specified collection groups.

Section 4.12.9.1.2 provides some examples along with detailed explanations for executing this utility.

4.12.9.1.1 Cleanup Configuration File

The Data Pool Cleanup utility uses a configuration file, EcDlCleanupDataPool.CFG, located in /usr/ecs/<mode>/CUSTOM/cfg directory. The configuration parameters are stored in a PARAMETER = VALUE format with each parameter/value pair as a separate line entry in the file. Table 4.12.9-2 describes the configuration parameters.

Table 4.12.9-2. Configuration Parameters

Parameter Name	Value Description
SYB_USER	Sybase login name for the user of the Data Pool database.
SYB_SQL_SERVER	Name of Sybase SQL Server hosting Data Pool database.
SYB_DBNAME	Name of Data Pool database.
PGM_ID	Program identifier used as seed to generate database password.
DEFAULT_LIMIT	Default priority limit if a limit (-limit) is not provided via command line.
NUM_RETRIES	Number of times database operation will be attempted.
SLEEP_SEC	Number of seconds between retries.
MAX_ORPHAN_AGE	Maximum age in days in qualifying a file as an orphan. A file must have an age greater than or equal to this value in order to be considered as an orphaned file. The parameter value must be 3 days or greater.

4.12.9.1.2 Examples

4.12.9.1.2.1 Examples for "Cleanup Only " Run

Note: Each invocation of the utility that involves cleanup will also automatically clean up recent insert files and HEG conversion files associated with orders that have the status of “DONE” or “FAILED”. In addition the cleanup utility will invoke the Bulk Export utility to report deleted granules back to ECHO.

1. Initiate Cleanup suppressing all user prompts and display messages, and report candidates to ECHO

```
EcDlCleanupDataPool.pl OPS -echomode predelete -noprompt
```

This command will generate a list of all granules in OPS mode with retention priorities less than or equal to the configured default limit (see Table 4.12.9-2) and expiration date/times on or before midnight of the previous day and report them to ECHO through the EcBmBulkURL. It will also turn off all prompts, removing the need for operator intervention. This form is suitable for running cleanup as a background job.

To actually clean up the data from the inventory and disks, a subsequent run must be made as follows using the echomode parameter of **finishdelete**:

```
EcDlCleanupDataPool.pl OPS -echomode finishdelete
```

2. Initiate Cleanup with default limit and date/time

```
EcDlCleanupDataPool.pl OPS -echomode predelete
```

This command will generate a list of all granules in OPS mode with retention priorities less than or equal to the configured default limit and expiration date/times on or before midnight of the previous day and report them to ECHO through the EcBmBulkURL utility. To actually clean up the data from the inventory and disks, a subsequent run must be made as follows using the echomode parameter of **finishdelete**:

```
EcDlCleanupDataPool.pl OPS -echomode finishdelete
```

3. Initiate Cleanup with a specific priority limit

```
EcDlCleanupDataPool.pl OPS -echomode predelete -limit <priority  
limit>
```

This command will generate a list of granules with retention priorities less than or equal to < priority limit > and expiration date/times on or before midnight of the previous day and report them to ECHO through the EcBmBulkURL utility.

For example, to clean up granules which had expired on or before midnight of the previous day and had a retention priority less than or equal to 100, the command would be the following:

```
EcDlCleanupDataPool.pl OPS -echomode predelete -limit 100
```

To actually clean up the data from the inventory and disks, this run would be followed by a subsequent invocation utilizing the **-echomode** parameter with a value of **finishdelete**:

```
EcDlCleanupDataPool.pl OPS -echomode finishdelete
```

4. Initiate Cleanup using a list of granules

```
EcDlCleanupDataPool.pl OPS -echomode predelete -file <file name>
```

This command will generate a list of granules whose granule ids are specified in <file name> and report them to ECHO through the EcBmBulkURL utility. The granule IDs are Data Pool granule IDs. Note that the **-limit** and **-offset** parameters can not be specified with **-file** option.

For example, to clean up two specific granules with IDs 1234 and 5678, a file "twograns.dat" could contain the following:

```
1234
```

```
5678
```

and the command would be the following:

```
EcDlCleanupDataPool.pl OPS -echomode predelete -file  
twograns.dat
```

To actually clean up the data from the inventory and disks, this run would be followed by a subsequent invocation utilizing the **-echomode** parameter with a value of **finishdelete**:

```
EcDlCleanupDataPool.pl OPS -echomode finishdelete
```

5. Initiate Cleanup using a list of geoids

```
EcDlCleanupDataPool.pl OPS -echomode predelete -geoidfile  
geoidlist.dat
```

This command will generate a list of all the granules in the Data Pool whose Science Data Server ECS IDs match the ECS IDs that are enumerated in the geoid list and report them to ECHO. For example to clean up two specific ECS granules with geoids of SC:MISL0DF.001:27056 and SC:MOD01.004:27057, a file geoidlist.dat could contain the following:

```
SC:MISL0DF.001:27056
```

```
SC:MOD01.004:27057
```

To actually clean up the data from the inventory and disks, this run would be followed by a subsequent invocation utilizing the **-echomode** parameter with a value of **finishdelete**:

```
EcDlCleanupDataPool.pl OPS -echomode finishdelete
```

6. Initiate Cleanup limiting the cleanup utility to only clean up granules found in the ECS granule event history table

```
EcDlCleanupDataPool.pl OPS -echomode predelete -ecsgrandel
```

This command will generate a list of all of the granules in the Data Pool that have entries in the ECS granule event history table that were marked as candidates for Science Data Server granule deletion. The list will be reported to ECHO as cleanup candidates through the EcBmBulkURL utility. It will not clean up any other Data Pool granules regardless of the configured retention priority or expiration date.

To actually clean up the data from the inventory and disks, this run would be followed by a subsequent invocation utilizing the **-echomode** parameter with a value of **finishdelete**:

```
EcDlCleanupDataPool.pl OPS -echomode finishdelete
```

7. Initiate Cleanup with an offset from the previous midnight

```
EcDlCleanupDataPool.pl OPS -echomode predelete -offset <hours>
```

This command will generate a list of all granules with retention priorities less than or equal to the configured default limit and expiration date/times on or before midnight of the previous day plus or minus the offset. It will report the cleanup candidates to ECHO via the EcBmBulkURL utility.

For example, let's suppose we wanted to clean up all granules that expired on or before 7pm yesterday. The command for this would be:

```
EcDlCleanupDataPool.pl OPS -echomode predelete -offset -5
```

Similarly, if we wanted to clean up all granules that will expire 48 hours in the future (actually 48 hours from the previous midnight), the command would be:

```
EcDlCleanupDataPool.pl OPS -echomode predelete -offset 48
```

As in previous examples, to actually clean up the data from the inventory and disks, each of these runs would be followed by a subsequent invocation utilizing the **-echomode** parameter with a value of **finishdelete**:

```
EcDlCleanupDataPool.pl OPS -echomode finishdelete
```

8. Limit the cleanup to a specific theme

```
EcDlCleanupDataPool.pl OPS -echomode predelete -offset <hours> -  
theme <themeName>
```

This command is the same as the one described in the Example 7 except the cleanup will be limited to a specified theme <themeName>.

As in previous examples, to actually clean up the data from the inventory and disks, the run would be followed by a subsequent invocation utilizing the **-echomode** parameter with a value of **finishdelete**:

```
EcDlCleanupDataPool.pl OPS -echomode finishdelete
```

9. Remove all cross-references to a specific theme

```
EcDlCleanupDataPool.pl OPS -noprompt -themexref <themeName>
```

This command removes all granule cross references to a specified theme <themeName> from the Data Pool inventory. It does not delete the granules or the physical granule files.

10. Initiate a Data Pool cleanup run to report cleanup candidates to ECHO and to subsequently remove the granules from the Data Pool database inventory and disks

```
EcDlCleanupDataPool.pl OPS -echomode deleteall
```

The **deleteall** value of the **echomode** parameter indicates the cleanup utility will report all cleanup candidates to ECHO and remove the inventory entries from the Data Pool database as well as clean up the physical files from the disks. The **echomode** parameter value of **deleteall** can be used with all other cleanup parameters except **-themexref**.

Note; The **deleteall** option operates in the same manner that Cleanup did prior to Synergy IV in that it reports to ECHO and deletes in one step rather than two.

4.12.9.1.2.2 Examples for "Validation Only " Run

1. Initiate a Data Pool Validation suppressing all user prompts and display messages

```
EcDlCleanupDataPool.pl OPS -orphan -phantom
```

This command validates the Data Pool by checking for orphans and phantoms and removes any discrepancies found from the Data Pool inventory and the disks. In checking for orphans, a default maximum orphan age provided via the configuration parameter MAX_ORPHAN_AGE will be used.

2. Initiate a Data Pool Validation without fixing discrepancies found

```
EcDlCleanupDataPool.pl OPS -orphan -phantom -nofix
```

This command performs the same Data Pool validation run as in Example 8, except that the discrepancies found will not be fixed but will be logged.

3. Initiate a Data Pool Validation but limit the validation to specified collection group(s)

```
EcDlCleanupDataPool.pl OPS -orphan -phantom -collgroup  
"MOAT,ASTT"
```

This command performs the same Data Pool validation run as in Example 8, except that the validation checking will be limited to the collection groups MOAT and ASTT.

4.12.9.1.2.3 Examples for "Cleanup followed by Validation" Run

1. Initiate a Data Pool Cleanup and Validation suppressing all user prompts and display of messages

```
EcDlCleanupDataPool.pl OPS -echomode predelete -cleanvalidate -  
orphan -phantom
```

This command will first generate a list of all granules in OPS mode with retention priorities less than or equal to the configured default limit and expiration date/times on or before midnight of the previous day. It will report the cleanup candidates to ECHO via the EcBmBulkURL utility. It will then validate the Data Pool by checking for both orphans and phantoms and will remove all discrepancies found from the Data Pool inventory and the disks.

As in previous examples, to actually clean up the data from the inventory and disks, the run would be followed by a subsequent invocation utilizing the **-echomode** parameter with a value of **finishdelete**:

```
EcDlCleanupDataPool.pl OPS -echomode finishdelete
```

2. Initiate a Data Pool Cleanup and Validation specifying maximum orphan age via command line

```
EcDlCleanupDataPool.pl OPS -echomode predelete -cleanvalidate -  
orphan -maxorphanage 5
```

This command is the same as the one described in Example 2 of Section 4.12.9.1.2.2, except that the validation step will only check for orphans using the maximum orphan age of 5 days provided via command line, and no phantom checking will be performed.

As in previous examples, to actually clean up the data from the inventory and disks, the run would be followed by a subsequent invocation utilizing the **-echomode** parameter with a value of **finishdelete**:

```
EcDlCleanupDataPool.pl OPS -echomode finishdelete
```

3. Initiate a Data Pool Cleanup and Validation limiting the validation to specified collection group(s)

```
EcDlCleanupDataPool.pl OPS -echomode predelete -cleanvalidate -  
orphan -phantom -collgroup "MOAT,ASTT"
```

This command is the same as the one described in Example 2 of Section 4.12.9.1.2.2, except that the validation step will limit the Data Pool validation to the two collection groups MOAT and ASTT specified via command line.

As in previous examples, to actually clean up the data from the inventory and disks, the run would be followed by a subsequent invocation utilizing the **-echomode** parameter with a value of **finishdelete**:

EcDlCleanupDataPool.pl OPS -echomode finishdelete

4.12.9.2 Data Pool Cleanup Utility Main Screen

The Data Pool Cleanup Utility does not have a main screen. It has a command line interface only.

4.12.9.3 Required Operating Environment

The Cleanup Utility will run on a SUN platform.

4.12.9.4 Databases

Table 4.12.9-3 lists the supporting products that this tool depends upon in order to function properly.

Table 4.12.9-3. Product Dependencies

Product Dependency	Protocols Used	Comments
Data Pool database	SQL	Via SQL server machines

4.12.9.5 Special Constraints

The Data Pool Cleanup utility runs only if the Data Pool database server is running and if the database is available. It also assumes the stored procedures are present.

The DAACs currently run the cleanup utility as a cron job that runs at a set time each evening. To accommodate the pre-delete capability, a script could be written to call Cleanup with **predelete** and then with **finishdelete**. A sleep statement could be inserted between the two invocations. This script could then be run as a cron job. Optionally, Cleanup could be run manually: DAACs may choose to run with **predelete** from the command line, wait for the email notification of success from ECHO, and then run with **finishdelete**.

Note: If a run that used an echomode parameter of **predelete** is not followed by a run that specifies an echomode parameter value of **finishdelete**, Cleanup will fail and log an error. This is done to avoid the situation where granules reported to ECHO in the first run as deleted are not actually deleted in the next run of cleanup. The ECHO system could easily get out-of-sync with the Data Pool.

4.12.9.6 Outputs

Output of update events and errors will be always appended to a single log file.

4.12.9.7 Event and Error Messages

Usage errors will be displayed to the screen. Processing error messages are written to the log files.

4.12.9.8 Reports

None.

4.12.9.9 Logs

The utility produces a log file called EcDICleanup.log in the /usr/ecs/<mode>/CUSTOM/logs directory. If this log file already exists, the new information will automatically be appended. If there is no existing log file by this name, a new log file with this name will automatically be created.

Since the log file may grow to a considerable size after constant use, it is recommended that it be saved off into a separate file from time to time for maintainability.

4.12.9.10 Recovery

The Data Pool Cleanup Utility provides a capability to recover from an execution failure caused by situations such as the system faults or database errors leaving all or some of the deletes unprocessed. The utility will detect such failure upon the next run and continue processing the deletes that were left unprocessed in the previous run. The operator is given no choice as to recovery. Recovery will proceed or the Data Pool inventory and disk files will be in a corrupted state. Most Recent Insert files that may have not been cleaned up during previous runs due to utility interruption or failure will be cleaned up on succeeding runs.

4.12.9.11 Sybase Error Handling

If a Sybase error occurs, you will most likely see the actual Sybase error string displayed on the screen and in the log. Some errors can be that the database server is unavailable, that the connection to the database was dropped, or that there was an error executing the stored procedure. In the event of a Sybase-sourced error, the utility will immediately stop running.

In the event that a connection to the Data Pool database can not be established, the utility may repeatedly attempt to connect to the database, depending on how the configuration file was set. If, for example, NUM_RETRIES was set to 5 and SLEEP_SEC was set to 10, this means it will try to connect 5 times, and will wait 10 seconds before each attempt – a total of 50 seconds if all attempts are unsuccessful.

4.12.10 Update Granule

The Update Granule Utility provides the ECS Operations Staff with a command-line interface to update the expiration date and optionally the retention priority of granules in the Data Pool inventory. The granules in the Data Pool inventory can be ECS or non-ECS granules. The utility can perform updates for

1. A single Data Pool granule
2. Multiple Data Pool granules
3. Granules associated with a theme name.

A single granule update can be performed by providing the granule ID, expiration date, and an optional retention priority via command-line input. Multiple granules can be updated by providing, via command line an input file, which contains a list of granule IDs, expiration date and an optional retention priority for each granule to be updated. To update the granules associated with a specific "theme", the operator must specify a valid theme name, expiration date and the optional retention priority via command line. When updating the granules associated with a theme, the utility updates the expiration date of a granule associated with that theme if and only if the new expiration date specified is later than the current expiration date of the granule, and the retention priority of a granule associated with that theme if and only if the new retention priority specified is higher than the current retention priority of the granule.

The utility, by default, displays summary information to the operator and prompts for confirmation before executing the update. All warning/error messages and confirmation prompts can be suppressed using the *noprompt* option. This option is suitable for running the utility as a background process, as a cron job, or other automated tasking.

No specific automatic recovery mechanism is provided for this utility. If there is a database fault, system fault, or the utility was inadvertently interrupted, it is sufficient for the operator to simply re-run the utility providing the same command-line parameters.

Input is provided via an input file.

4.12.10.1 Quick Start using the Update Granule Utility

The Update Granule Utility is a Perl script residing in `/usr/ecs/<mode>/CUSTOM/utilities` directory. The utility can be run using the following command line syntax.

```
EcDlUpdateGranule.pl <mode> [-noprompt] -file <fileName>
```

OR

```
EcDlUpdateGranule.pl <mode> [-noprompt]
    -grnid <granuleID> | -theme <themeName>
    -exp <expirationDate>
    [-ret <retentionPriority>]
```

Note: The command line parameter changes from the previous release include the removal of "-verbose | -nonverbose" options, and the addition of "-theme" option.

Table 4.12.10-1 provides a description of the command line parameters.

Table 4.12.10-1. Command Line Parameters of the Update Granule Utility

Parameter Name	Description
<mode>	An input parameter specifying the mode of operation. This must be the first parameter passed, and it must be a valid, existing Data Pool mode with a format like OPS or TS1.
-noprompt	Directs the utility to run using the "noprompt" display option. The utility suppresses the displaying of all messages to the screen and updates the granules without prompting the operator for confirmation. This option is suitable for running the utility as a background process.
-file <filename>	An input parameter specifying the file to be used to input granule data to the utility. <filename> is the name of a file containing a list of granule triplets. Each triplet is a separate line entry in the input file and consists of granule ID, expiration date, and an optional retention priority. The granule ID in each triplet corresponds to the granule ID in the DIGranules table in the Data Pool database.
-grnid <granule ID>	An input parameter specifying the granule information to be entered manually at the command line. The <granule ID> parameter must be a positive integer containing no more than 16 digits and corresponds to the granuleid in the DIGranules table in the Data Pool database.
-theme <theme name>	An input parameter specifying a valid theme name. The theme name is a character string and must match an existing theme name in the Data Pool inventory and is case sensitive. Note: If the theme name contains spaces like "Volcano Eruption", it <i>must</i> be enclosed in single or double quotes, or only the first word of the title is used (an error could also occur when running the script).
-exp <expiration Date>	An input parameter specifying the new expiration date to be applied to the science granule indicated by the <granule ID>. The <expiration Date> has the format YYYY/MM/DD.
-ret <retention priority>	An input parameter specifying the new retention priority to be applied to the science granule indicated by the <granule ID>. The <retention priority> must be a positive integer within the range of 1 to 255, 1 being the lowest retention priority and 255 being the highest retention priority.

4.12.10.1.1 Update Granule Utility Commands

Below are some examples for invoking this utility:

1. `EcDlUpdateGranule.pl <mode> -file <file name>` Updates the granules provided via an input file. The utility displays all summary information and prompts the operator to confirm the update.

Table 4.12.10-2. Configuration Parameters

Parameter Name	Description
SYB_USER	The user name for the Sybase connection.
SYB_SQL_SERVER	The name of the SQL server for this Sybase connection.
SYB_DBNAME	The name of the database you intend to connect to.
PGM_ID	Program ID used for connecting to the Data Pool database.
NUM_RETRIES	The number of times the utility attempts to connect to the database before exiting. The recommended default is 5.
SLEEP_SEC	The number of seconds the utility waits ('sleep') between connection attempts. The recommended default is 10.

4.12.10.2 Update Granule Utility Main Screen

The Update Granule Utility does not have a main screen. It has a command line interface only.

4.12.10.3 Required Operating Environment

The Update Granule Utility runs on Sun Solaris platforms.

4.12.10.4 Databases

Table 4.12.10-3 lists the supporting products that this tool depends upon in order to function properly.

Table 4.12.10-3. Interface Protocols

Product Dependency	Protocols Used	Comments
Data Pool database	SQL	Via SQL server machines
Perl DBI	DBD::Sybase	Requires proper install of Perl 5.005

If a Sybase error occurs, you are most likely to see the actual Sybase error string displayed on the screen and in the log. Some of the errors that can occur are the database server is unavailable, the connection to the database was dropped, or there was an error executing the stored procedure. In the event of a Sybase-sourced error, the utility immediately stops running.

In the event a connection to the Data Pool database can not be established, the utility can repeatedly attempt to connect to the database, depending on how the configuration file was set (see Section 4.12.10.4.2). If, for example, NUM_RETRIES was set to 5 and SLEEP_SEC was set to 10, this means it tries to connect 5 times, and waits 10 seconds before each attempt – a total of 50 seconds if all attempts are unsuccessful.

4.12.10.5 Special Constraints

The Update Granule Utility runs only if the Data Pool database server is running and if the database is available. It also assumes the stored procedures are present.

4.12.10.6 Outputs

Output of update events and errors is always appended to a single log file. Unless the *noprompt* option is specified on the command line, confirmation prompts and information are always displayed to the screen.

4.12.10.7 Event and Error Messages

By default, confirmation messages are displayed to the operator, as well as any error conditions that may arise. Error messages are also written to the log files. With the *noprompt* option, all messages to the screen are suppressed and only written to the log file. Command-line syntax errors are displayed regardless of the *noprompt* option.

The utility produces a log file called `EcDIUpdateGranule.log` in the `/usr/ecs/<mode>/CUSTOM/logs` directory. If this log file already exists, the new information is automatically appended. If there is no existing log file by this name, a new log file with this name is automatically created.

4.12.10.8 Reports

None.

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4.12.11 Data Pool Access Statistics Utility (DPASU) – Rollup Scripts

The Data Pool Access Statistics Utility (hereafter referred to as “DPASU”) provides the ECS Operations Staff with several capabilities related to collecting access statistics for the Data Pool database. The DPASU encompasses two types of scripts: rollup and maintenance. The rollup scripts read and parse access logs to compile statistics and store those records in the Data Pool database, while the maintenance scripts backup, restore, and delete data in the related Data Pool database tables.

These scripts may be run on the command-line, and must be run with an operations mode. Details and instructions on how to run and configure these scripts are provided in subsequent sections.

4.12.11.1 Data Pool Access Rollup Scripts

The Data Pool access rollup scripts provide the ECS Operations Staff with the capability to parse the Data Pool web access and FTP logs for Data Pool access information and store the access information in the Data Pool database. For each Data Pool file access found in the FTP or web access logs, the rollup scripts store into the Data Pool database (in the DIGranuleAccess table) the time of access, the corresponding granule ID, the file type (metadata, browse or science), the file size (in bytes), the access type (FTP or HTTP), and the age of granule at access time (i.e., the number of days the granule has been in the Data Pool at the time of access). Such information collected over a period of time can provide useful statistical information regarding the Data Pool access patterns and provides insight into planning future support.

There are two Data Pool access rollup scripts, one for rolling up Web accesses (EcDIRollupWebLogs.pl) and the other for rolling up FTP accesses (EcDIRollupFwFtpLogs.pl). The scripts are installed and run on the Data Pool host x0dps01.

Each rollup script is a command-line utility allowing the operator to optionally pass input parameters. Operationally, the rollup script is run in a cron job, with the crontab file specifying when the rollup script shall start its daily execution. Each time the rollup scripts are run, they roll up the Data Pool accesses that occurred over a specified 24-hour period in the past and store them into the Data Pool database.

By default, the start date of the 24-hour rollup period is one day prior to the date when the rollup script is executed. However, the rollup scripts allow a non-default start date of the rollup period to be specified via command line. This capability is provided to allow the DAAC operator to run the rollup scripts manually to compile statistics for a particular date for which the regular cron job may not have run for some reason.

To allow flexibility for each DAAC to specify the start time of the 24-hour rollup period, the start time is provided as a configuration parameter (ROLLUP_START_TIME). (See Section 4.12.11.3.3 for description of configuration parameters.) For example, if the start time is configured as 0:00 hours (midnight), then the rollup period will always cover a 24 hour period starting from 0:00 on the rollup start date. If the start time is configured as 6:00 hours, the rollup period always covers a 24-hour period starting from 6AM of the rollup start date.

Each of the Data Pool access rollup scripts work as follows. The script first parses the specified FTP or Web access log(s) for Data Pool access events. After the log files are parsed, the captured data is written to a temporary “flat file” – a tab-delimited text file. This file gets exported to the Data Pool database, where it is stored in a temporary table (DIftpAccessLog or DIWebAccessLog). The rollup script then uses information in the temporary access log tables and other Data Pool database tables to determine the information to be written to the DIGranuleAccess table. The flat file is removed and an entry is made into the DIAccessRollup table to keep a record of which periods have been successfully “rolled up” to prevent the accidental reprocessing of that period.

Normally the Data Pool access rollup scripts are run by cron. Unless the cron job was completely successful, no entry is made into the DIAccessRollup record table to indicate the rollup period was processed. Therefore, the DAAC operator is able to reprocess that period by manually running the rollup scripts from the command line.

4.12.11.1.1 Invoking the Data Pool Access Rollup Scripts from the Command Line Interface

Entering the following commands run the rollup scripts:

% **EcDIRollupWebLogs.pl** <command line parameters>

% **EcDIRollupFwFtpLogs.pl** <command line parameters>

There are various optional and required command line parameters used in combination with each other. Table 4.12.11-1 provides a description of these parameters.

Table 4.12.11-1. Command Line Parameters of the DPASU (1 of 2)

Parameter Name	Necessity	Description
<MODE>	Required	Indicates the Data Pool MODE the script is to run in. This parameter has the following constraints: It must be the first parameter with no label The <MODE> must imply a valid directory path An example of a <MODE> is OPS, TS1, TS2, et cetera.
-noprompt	Optional	Turns on the “noprompt” display mode – suppressing all output to the screen. This should be used in cron jobs or other scenarios where output to a display is not desired. The default display mode writes messages to the screen.
-flatfile <path/file>	Optional	Provides an alternative path/file name for the flat file produced by the parser. This is only useful with the –nodelete option.
-nodelete	Optional	Prevents the flat file from being deleted once the DPASU completes its run.

Table 4.12.11-1. Command Line Parameters of the DPASU (2 of 2)

Parameter Name	Necessity	Description
-fwftp <path/file(s)>	Optional	Indicates an alternative FIREWALL FTP log path/file(s) to be used instead of the configured default path/file(s). Use of a wildcard character is permitted in the file name, but if a wildcard is used, the path/file name must be enclosed in quotes (e.g. "/usr/ecs/OPS/COTS/firewall/logs/datapoolftplog.*"). For EcDIRollupFwFtpLogs.pl only.
-web <path/file(s)>	Optional	Indicates an alternative web log path/file(s) to be used instead of the configured default path/file. Use of a wildcard character is permitted in the file name, but if a wildcard is used, the path/file name must be enclosed in quotes (e.g., "/usr/ecs/OPS/CUSTOM/logs/WebAccess.log*"). For EcDIRollupWebLogs.pl only
-start <date>	Optional	Indicates the alternative start date for the rollup period with the format YYYY/MM/DD. This can be used to process previously uncovered periods. The default date is the date cron actually runs the DPASU on a day-to-day basis.

4.12.11.1.2 Default Rollup Period

By default, the rollup period begins 24 hours before the current date (i.e., the date on which the rollup script is run, either manually or by cron) plus the configured rollup start time (see Section 4.12.11.3.3 for configuration of the ROLLUP_START_TIME parameter). For example, if the rollup script is run on September 23, and the configured rollup start time is "2:00", the Rollup period begins on September 22 at 2:00 a.m. and ends on September 23 at 1:59 a.m.

This means the Rollup script scans the specified log(s) for all entries having an access time between Sep 22 2:00 a.m. and Sep 23 1:59 a.m. Note that the 24-hour rollup period must be in the past as compared to the time the rollup script is run. The rollup script does not execute and terminates with an error if it detects the rollup period that was specified spans into a future time.

4.12.11.1.3 Specifying an Optional Start Date of Rollup Using **-start** Option

The rollup scripts allow an optional rollup period start date to be specified via command line using the **-start** option. With this option, a valid date must be entered in the following ordinal format:

YYYY/MM/DD

Because this is an optional *start* date, the end date gets 24 hours *added* to it. Therefore, if at the command-line the operator enters **-start 2002/09/18** (presumably because cron failed to run the DPASU Rollup on that day), the rollup scripts look for all entries with access times between 09/18/2002 02:00 and 09/19/2002 01:59.

The scripts check the input date at the command line to make sure it is valid before it parses the logs.

4.12.11.1.4 Running Data Pool Access Rollup Scripts with *cron*

The Data Pool access rollup scripts are run by cron on a daily basis at a consistent time of day. There are a number of factors to consider when determining at what time to run the rollup scripts each day. Factors are:

- a. The rollup scripts should be run at a time of day that is **AFTER** the configured rollup start time. (A good rule of thumb is to have the scripts run at least one half hour after the rollup start time.) This ensures the 24-hour rollup period has completed at the time the rollup scripts are run.

Example 1: If the rollup start time is 2:00 a.m., the cron should run the rollup scripts at a time after 2:30 a.m.

Example 2: If the rollup start time is 22:00, the cron should run the rollup scripts at a time after 22:30, but *not* after 23:59 because any time after that is the next day.

- b. It is recommended the rollup scripts be run by cron at a time of day when Data Pool access activity is low – e.g., during the early morning hours.
- c. The rollup scripts should be run **BEFORE** the daily Data Pool Cleanup script is run, to minimize chances that information about files accessed during the 24-hour rollup period has been removed from the Data Pool database. (If this information has been removed, the rollup scripts are unable to write information for those files in the DIGranuleAccess table.)
- d. The rotation/renaming times of the Web Access and FIREWALL FTP log files and the time the corresponding rollup script is run must be taken into consideration in determining, which log files to parse and whether to use a wildcard in the specification of the log file path.

For example, consider the case where the FIREWALL FTP log is rotated/renamed each day at 01:00, and the FTP rollup script is run at 03:00 with a rollup start time of 02:00. When the rollup script is run at 03:00 on September 22, 2002, the rollup period is September 21, 2002 02:00 through September 22, 2002 01:59. The FIREWALL FTP log (e.g. datapoolftplog.1) which was rotated/renamed at 01:00, now only contains accesses for the time period September 22, 2002 01:00 through September 22, 2002 03:00 (the current time). The previous FIREWALL FTP log (e.g. datapoolftplog.0), contains accesses for the time period September 21, 2002 01:00 through September 22, 2002 00:59. To capture information for the entire rollup period, the ftp rollup script must be configured to parse both the datapoolftplog.1 and datapoolftplog.0 .

This may be accomplished either by running the ftp rollup script twice, once against datapoolftplog.1 and once against datapoolftplog.0, or by running the script once and using a wildcard to specify the ftp log path. (Note that wildcard path names must be enclosed in quotes if used on the command line with the `-web` or `-fwftp` command line parameters, but do NOT need to be enclosed in quotes if used with the configuration parameters `WEB_LOG_PATH` or `FTP_FIREWALL_LOG_PATH`. See sections 4.12.11.1.5 and 4.12.11.1.6)

- e. To prevent or minimize the chances of database contention, it is recommended the daily cron job for rolling up FIREWALL FTP access logs and the daily cron job for rolling up web access logs be staggered, so the two rollup scripts do not run at the same time.

In the case that *cron* fails to run the Data Pool access rollup scripts on a given day, the operator can manually run either script, specifying the date(s) missed using the `-start` command line parameter.

4.12.11.1.5 Specifying Alternative Paths for FIREWALL FTP or Web Access Logs

The operator can specify an access log file path different than that specified in the configuration file by using the `-web` and/or `-fwftp` command line parameters. If alternative access log file paths are used with the command line options `-web` and `-fwftp`, any wildcards used to indicate multiple files matching a pattern need to be enclosed in quotes. If they are not, the rollup scripts cannot use the files you intended. The scripts *internally* (i.e., not the shell) match all files indicated by wildcards on the command line.

For example, the path

```
/usr/ecs/OPS/COTS/firewall/logs/datapoolftplog.*
```

must be enclosed in quotes as follows

```
"/usr/ecs/OPS/COTS/firewall/logs/datapoolftplog.*"
```

to ensure the wildcard character (*) is properly passed

Keep in mind that quotes around wildcard path names are only required on the command line; they are NOT required in the configuration file.

4.12.11.1.6 Intermediate Flat File

The rollup scripts create an intermediate flat file from the log entries that contain all the data that will be exported to the database via bulk copy procedure (bcp). Normally, this file is temporarily placed in a data directory and then deleted, once the scripts have completed running. The operator can keep that flat file by specifying the `-nodelete` option. By default, the intermediate flat file is created in the following directory:

```
usr/ecs/<MODE>/CUSTOM/data/DPL/
```

The operator can specify an alternate path and name for this file on the command line using the `-flatfile` option.

4.12.11.1.7 Command-line Examples

Here are some examples of executing the Data Pool access rollup scripts from the command line.

Example 1:

```
EcDiRollupWebLogs.pl OPS -noprompt -nodelete -start 2002/12/22
```

Run Web rollup script in -noprompt display mode for an optional 24-hour rollup period starting from December 22, 2002, at the configured rollup start time. The -nodelete option prevents the flat file from being erased upon completion.

Example 2:

EcDlRollupFwFtpLogs.pl OPS -noprompt

Run FIREWALL FTP rollup script in -noprompt display mode for the default 24-hour rollup period starting from yesterday at the configured rollup start time. This example is typical of syntax used in the crontab file.

Example 3

EcDlRollupFwFtpLogs.pl OPS -start 2002/02/15 -fwftp "/usr/logs/.log "*

Run FIREWALL FTP Rollup script in prompted mode, for an optional 24-hour rollup period starting from February 15, 2002, at the configured rollup start time, but use the FIREWALL FTP access logs stored in an alternative path /usr/logs.

4.12.11.2 Data Pool Access Statistics Main Screen

The Data Pool Access Statistics does not have a main screen. It is a command line interface.

4.12.11.3 Required Operating Environment

The Data Pool access rollup scripts run in a SUN Unix operating environment.

4.12.11.3.1 Interfaces to supporting products

Table 4.12.11-2 lists the supporting products that this tool depends upon in order to function properly.

Table 4.12.11-2. Interface Protocols

Product Dependency	Protocols Used	Comments
Data Pool database	SQL	Via SQL server machines
Perl DBI	DBD::Sybase	Requires proper install of Perl

4.12.11.3.2 Access Log File Formats

The Data Pool access rollup scripts are dependent on a particular format of both the FIREWALL FTP and Web access logs. If the format of these log files changes, it is quite possible the scripts can incorrectly read certain fields and consequently provide incorrect or misleading rollup reports, and can even prevent the scripts from running at all. It is important to have the rollup script code adjusted if the FIREWALL FTP or WEB access log formats change in any way. Subsequent sections provide format details for these access logs.

4.12.11.3.3 Configuration Files for Data Pool Access Rollup Scripts

The Data Pool access rollup scripts use configuration files containing details about how to connect to Sybase and about where the log files exist. The file *EcDIWebRollup.CFG* contains the configuration parameters for the Web Rollup script whereas *EcDIFwFwRollup.CFG* contains the configuration parameters for the FTP Rollup script. Without the configuration files, the scripts can not run. Each configuration file must be a plain text ASCII file, which has the following format, not necessarily in this order:

```

SYB_USER = <string>
SYB_SQL_SERVER = <string>
SYB_DBNAME = <string>
NUM_RETRIES = <integer>
SLEEP_SEC = <integer>
WEB_LOG_PATH = <path and file name>
FTP_FIREWALL_LOG_PATH = <path and file name>
ROLLUP_START_TIME = <time of day>

```

Table 4.12.11-3 describes the individual configuration parameters mentioned above.

Table 4.12.11-3. Data Pool Access Configuration Parameters for Rollup Scripts

Parameter Name	Description
SYB_USER	The user name for the Sybase connection.
SYB_SQL_SERVER	The name of the SQL server for this Sybase connection.
SYB_DBNAME	The name of the Data Pool database you intend to connect to.
NUM_RETRIES	The number of times the utility attempts to connect to the database. The recommended default is 5.
SLEEP_SEC	The number of seconds the utility waits ('sleep') between connection attempts. The recommended default is 10.
WEB_LOG_PATH	The path and file name for the Data Pool Web Access custom code log. This parameter is valid for <i>EcDIWebRollup.CFG</i> only. The web rollup script automatically uses this path (and file or files) if an alternative one is not explicitly provided. Wildcards are permitted and do not need to be enclosed in quotes.
FTP_FIREWALL_LOG_PATH	The path and file name for the default ftp access log. This parameter is valid for <i>EcDIFwFwRollup.CFG</i> only. The FIREWALL FTP rollup script automatically uses this path (and file or files) if an alternative one is not explicitly provided. Wildcards are permitted and do not need to be enclosed in quotes.
ROLLUP_START_TIME	The configurable time of day the rollup script uses as an anchor to start looking at log entries with, i.e., "3:00". 24-hour time must be used for this entry.

4.12.11.4 Databases

The Data Pool Access Statistics utility uses the Sybase ASE Server.

4.12.11.5 Special Constraints/Dependencies

The Data Pool access rollup scripts function only if the Data Pool database server is running and if the Data Pool database is available. The rollup scripts also assume the required stored procedures are present in the Data Pool database.

Special modules are also required to run this utility. If those modules are not present or are located in an unfamiliar directory, it fails to run. Table 4.12.11-4 describes the modules required to run the rollup scripts.

Table 4.12.11-4. Data Pool Access Special Modules

Name	Description
EcDIDbInterface.pm	Database interface and connection module.
EcDIDateTime.pm	Date/time grabber with millisecond resolution.

4.12.11.6 Outputs

Rollup information is entered in the Data Pool database in the DIGranuleAccess table. If the `-noprompt` option is not on, examining status and other messages are printed to the screen. Log messages are also recorded (see below).

4.12.11.7 Event and Error Messages

All event and error messages generated from the rollup scripts are written to the respective log files. When the scripts are run in the prompted mode (default), the messages are also displayed to the screen in addition to writing to the logs.

4.12.11.8 Reports

None.

4.12.11.9 Recovery Procedures

In the case that `cron` fails to run the Data Pool access rollup scripts on a given day, the operator may manually run either script, specifying the date(s) missed using the `-start` command line parameter. See Section 4.12.11.1.3 for details.

4.12.12 Data Pool Access Statistics Utility (DPASU) – Maintenance Scripts

The Data Pool Access Statistics Utility (hereafter referred to as “DPASU”) provides the ECS Operations Staff with several capabilities related to collecting access statistics for the Data Pool database. The DPASU encompasses two types of scripts: rollup and maintenance. The rollup scripts read and parse access logs to compile statistics and store those records in the Data Pool database, while the maintenance scripts backup, restore, and delete data in the related Data Pool database tables.

These scripts may be run on the command-line, and must be run with an operations mode. Details and instructions on how to run and configure these scripts are provided in subsequent sections.

4.12.12.1 Data Pool Access Maintenance Scripts

The Data Pool access maintenance scripts are operational support tools used for archiving, deleting, and backing up granule access data in the Data Pool database. Each of these scripts can be run on the command line and connects to the Data Pool database to process data contained therein. These scripts are installed and run on the Data Pool database host (x0acg0n), in the /usr/ecs/<mode>/CUSTOM/dbms/DPL directory. All of these scripts involve access to the Data Pool tables DIGranuleAccess, DIGranuleSubscription, and DIAccessRollup.

Archive Utility - *DI DbArchiveAccessStat*

This script archives data contained in DIGranuleAccess, DIGranuleSubscription, and DIAccessRollup by writing this data to an ASCII file based on an operator-specified time range.

Delete Utility - *DI DbDeleteAccessStat*

This script removes data contained in DIGranuleAccess, DIGranuleSubscription, and DIAccessRollup based on an operator-specified time range.

Restore Utility - *DI DbRestoreAccessStat*

This script restores data archived by the archive utility (contained in the ASCII file) into DIGranuleAccess, DIGranuleSubscription, and DIAccessRollup.

4.12.12.2 Invoking the Maintenance Utilities from the Command Line Interface

Entering the following commands start the maintenance utilities:

> **UtilityName <command line parameters>**

There are various command line parameters used in combination with each other. Table 4.12.12-1 provides a description of these parameters

Table 4.12.12-1. Command Line Parameters of the DPASU Access Maintenance Scripts

Parameter Name	Description
<MODE>	The mode in which the utility is being executed.
<STARTDATE>	The beginning date time range for archiving, deleting, or restoring the data. The format for this parameter is yyyyymmdd.
<STOPDATE>	The ending date time range for archiving, deleting, or restoring the data. The format for this parameter is yyyyymmdd.
<ARCHIVEDIR>	The absolute path where the generated ASCII files are stored when archiving or restoring data (this parameter only applies to the archiving and restoring scripts). The ASCII files are generated from the archive utility. The file name follows the convention <tablename>.dat.<startdate><stopdate>.
<USERNAME>	The Sybase login name.
<SERVER>	The Sybase Server where the Data Pool database located.
<DBNAME>	The name of the Data Pool database.

The parameters shown here are those used for all of the maintenance scripts. See the “Utility Commands” section for each script for specific usage. Please note that these parameters must be provided in the exact order as shown in the examples below.

Each of the scripts prompts the user to enter the password for the Sybase login.

4.12.12.3 Archive Utility Commands

The archive utility must be run with the following parameters in this exact order. There is only one command-line permutation:

```
DlDbArchiveAccessStat <MODE> <STARTDATE> <STOPDATE> <ARCHIVEDIR> <USERNAME> <SERVER> <DBNAME>
```

Example:

```
DlDbArchiveAccessStat OPS 20020405 20020505 /home/DBArchive/DataPool/ Labuser01
SybSQL_srvr DataPool_DB
```

The above example archives data to files and stores them in a specified directory.

4.12.12.4 Delete Utility Commands

The Delete Utility must be run with the following parameters in this exact order. There is only one command-line permutation:

```
DlDbDeleteAccessStat <MODE> <STARTDATE> <STOPDATE> <USERNAME> <SERVER> <DBNAME>
```

Example:

```
DlDbDeleteAccessStat OPS 20020912 20020913 Labuser01 SybSQL_srvr DataPool_DB
```

The above example deletes data in a specified time range.

4.12.12.5 Restore Utility Commands

The Restore utility must be run with the following parameters in this exact order. There is only one command-line permutation:

```
DlDbRestoreAccessStat <MODE> <STARTDATE> <STOPDATE> <ARCHIVEDIR> <USERNAME> <SERVER>
<DBNAME>
```

Example:

```
DlDbRestoreAccessStat OPS 20020405 20020505 /home/DBArchive/DataPool/ Labuser01
SybsQL_srvr DataPool_DB
```

The above example restores data in a specified time range from a specified archive directory.

4.12.12.6 Data Access Statistics Main Screen

The Data Pool Access Statistics utility does not have a main screen. It has a command line interface.

4.12.12.7 Required Operating Environment

The maintenance utilities run on an SGI UNIX platform.

4.12.12.7.1 Interfaces to Supporting Products

Table 4.12.12-2 lists the supporting products that these tools depend upon to function properly.

Table 4.12.12-2. Interface Protocols

Product Dependency	Protocols Used	Comments
SDSRV database	SQL	Via SQL server machines

4.12.12.8 Databases

The Data Pool Access Statistics utility uses the Sybase ASE Server.

4.12.12.9 Special Constraints

The maintenance utilities run only if the Data Pool database is available and the Sybase server is running.

4.12.12.10 Outputs

There are no outputs from the maintenance scripts, except the error messages to the log.

4.12.12.11 Event and Error Messages

All error messages are written to the log files, which are DlDbRestoreAccessStat.log, DlDbArchiveAccessStat.log and DlDbDeleteAccessStat.log.

4.12.12.12 Reports

None.

4.12.13 Most Recent Data Pool Inserts Utility

The most recent data pool insert utility provides the ECS Operations Staff with a command-line interface for listing the most recent additions to data pool. Output of this utility is a set of files that a user could download and quickly inspect for new Data Pool additions. In operation, this utility would be configured to run as a cron job.

Utility takes in a date command-line parameter representing the day user is interested in. Files inserted into Data pool on this day would be listed in the output files. If a date is not provided, the utility uses the previous date as a default with a time range of midnight to midnight.

Since this utility requires connection to database, there will be a configuration file containing all information needed for accessing database. Further more, all error messages would be written to an error log file in /usr/ecs/<MODE>/CUSTOM/logs directory.

4.12.13.1 Using Most Recent Data Pool Inserts Utility

Utility would mainly be run as a cron job.

For command line usage, utility is started by entering the following:

> **EcDIMostRecentInsert.pl** <MODE> [-insertDate <YYYY/MM/DD>]

Command line parameters and corresponding descriptions that could be used with Most Recent Data Pool Inserts utility are listed in Table 4.12.13-1.

**Table 4.12.13-1. Command Line Parameter
Most Recent Data Pool Inserts Utility**

Parameter Name	Required	Description
MODE	Yes	An input parameter that specifies the mode of operation. This must be the first parameter passed, and it must be a valid, existing Data Pool mode such as OPS or TS1.
insertDate	No	An optional parameter specifying date in which user is interested. If date parameter is not present, previous day date is used by default. Date format is YYYY/MM/DD.

Executing this utility requires the mode as the first input parameter else a fatal error would be returned. If the date parameter is present, it must conform to the following format YYYY/MM/DD. Incorrect input parameters would result in errors being written to log file.

4.12.13.2 Most Recent Data Pool Inserts Utility Commands

Examples of how to use this utility is shown below:

1. EcDIMostRecentInsert.pl OPS -insertDate 2003/02/28

Queries database and creates file containing listings Data Pool additions for day 2003/02/28 for OPS mode.

2. EcDIMostRecentInsert.pl OPS

Since “-insertDate” command line parameter is not entered, the previous day is

used by default. Queries database and creates files listing recent additions to database for previous day for OPS mode.

4.12.13.3 Required Operating Environment

The O/S requirements are Solaris 2.5.1 or higher.

4.12.13.4 Interfaces and Data Types

Table 4.12.13.4 lists the supporting products that this tool depends upon in order to function properly.

Table 4.12.13-2. Interface Protocols

Product Dependency	Protocols Used	Comments
Data Pool database	SQL	Via SQL server machines

4.12.13.5 Configuration File Format – EcDIMostRecentInsert.CFG

The “config” file contains vital details about how to connect to the Sybase database. Without this file, the utility can not run. The config file must be a single-entry plain text ASCII file, which has the following format:

```
SYB_USER = <string>
SYB_SQL_SERVER = <string>
PGM_ID = <string>
SYB_DBNAME = <string>
NUM_RETRIES = <integer>
SLEEP_SEC = <integer>
```

Breakdown of the individual parameters:

Parameter Name	Description
SYB_USER	The user name for the Sybase connection.
SYB_SQL_SERVER	The name of the SQL server for this Sybase connection.
SYB_DBNAME	The name of the database you intend to connect to
PGM_ID	Program ID used for connecting to the Data Pool database.
NUM_RETRIES	The number of times the utility will attempt to connect to the database before exiting. The recommended default is 5.
SLEEP_SEC	The number of seconds the utility will wait ('sleep') between connection attempts. The recommended default is 10.

4.12.13.6 Special Constraints

EcDIMostRecentInsert utility runs only if the Data Pool database server is running and if the database is available. It also assumes the stored procedures are present.

4.12.13.7 Outputs

Output of this utility is a set of files. One file located at top level Data Pool directory named DPRRecentInserts_<YYYYMMDD> and a file in each of the collection level directories named DPRRecentInserts_<ShortName>_<VersionID>_<YYYYMMDD>.

File DPRRecentInserts_<YYYYMMDD> contains distinct ShortNames and VersionIds while file DPRRecentInserts_<ShortName>_<VersionID>_<YYYYMMDD> contains ShortName, VersionId and fully qualified.

Note: The EcDIMostRecentInsert.pl would shut down and log an error message if it is unable to create a file at the top level data pool directory. If it is unable to create file at the collection level directory, program would log an error message and continue with processing other valid directories. Also, each time utility runs with the same input argument, the contents of the previously created file are over written.

4.12.13.8 Event and Error Messages

Usage and processing error messages are written to log file.

4.12.13.9 Reports

None.

4.12.13.10 Logs

The utility produces a log file called *EcDIMostRecentInsert.log* in the */usr/ecs/<MODE>/CUSTOM/logs* directory. If this log file already exists, the new information will automatically be appended. If there is no existing log file by this name, a new log file with this name will automatically be created.

4.12.13.11 Recovery

If there is an execution failure as a result of database server or system shut down, operator simply re-runs the script. This would create a new set of files (i.e. over writing previous ones) listing additions to Data Pool for the specified insert date.

4.12.13.12 Sybase Error Handling

The utility is highly dependent on Sybase server. Connection failure to Sybase Server would simply result in program termination and error logged to log file.

Note: The utility may repeatedly attempt to connect to the database, depending on how the configuration file was set. As an example, NUM_RETRIES set to 5 and SLEEP_SEC set to 10 in configuration file would mean the utility would try to connect 5 times, and will wait 10 seconds before each attempt.

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4.12.14 Data Pool Collection-to-Group Remapping Utility

The Data Pool Collection-to-Group Remapping Utility will allow DAAC Operations to re-assign a Data Pool collection to a collection group different from the one to which the collection was assigned originally. This command line utility will be used to remap collections between groups.

Note: Prior to using this utility you must set the “Insert Enabled Flag” to off using the Data Pool Maintenance GUI for the source collection.

4.12.14.1 Using the EcDIRemap utility

The Data Pool Collection-to-Group Remapping Utility is invoked as follows:

```
>EcDIRemap.pl <mode> -esdt <source collection name> -version <source collection version> -oldgrp <group to which the collection currently belongs> -newgrp <group to which the current collection will be mapped>
```

There are various command line parameters that are used in combination with each other. Table 4.12.14-1 provides a description of these parameters.

Table 4.12.14-1. Command Line Parameters

Parameter Name	Required	Description
mode	Yes	The mode in which the utility will run.
esdt	Yes	Specifies the name of the source collection that is being remapped
version	Yes	Specifies the version of the source collection that is being remapped
oldgrp	Yes	Specifies the name of the source collection group that contains the source collection
newgrp	Yes	Specifies the destination group where the source collection is to be mapped

Section 4.12.14.3 provides some examples along with detailed explanations for executing this utility.

4.12.14.2 Data Pool Collection-to-Group Remapping Utility Configuration File

The Data Pool Collection-to-Group Remapping utility uses a configuration file, EcDIRemap.CFG, located in /usr/ecs/<mode>/CUSTOM/cfg directory. The configuration parameters are stored in a PARAMETER = VALUE format with each parameter/value pair as a separate line entry in the file. Table 4.12.14-2 describes the configuration parameters.

Table 4.12.14-2. Configuration Parameters

Parameter Name	Value Description
SYB_USER	Sybase login name for the user of the Data Pool database.
SYB_SQL_SERVER	Name of Sybase SQL Server hosting Data Pool database.
SYB_DBNAME	Name of Data Pool database.
PGM_ID	Program identifier used as seed to generate database password.
NUM_RETRIES	Number of times database operation will be attempted.
SLEEP_SEC	Number of seconds between retries.

4.12.14.3 Examples for Remapping a Collection

1. **Remap a collection MOD29, Version 4 from the group MOST to the group MOSS in the OPS mode:**

```
EcDlRemap.pl OPS -esdt MOD29 -version 4 -oldgrp MOST -newgrp MOSS
```

The utility will remap the directory from the old collection MOD29.004 beneath the MOST group to the collection MOD29.004 under the MOSS group. The Data Pool database inventory will be updated to reflect the new location of the files.

Previous directory structure before remapping (example):

```
/datapool/OPS/user/MOST/MOD29.004/2000.10.31/MOD29.A2000305.h11v11.004.20012651  
13249.hdf
```

New directory structure following the remapping:

```
/datapool/OPS/user/MOSS/MOD29.004/2000.10.31/MOD29.A2000305.h11v11.004.20012651  
13249.hdf
```

4.12.14.4 Required Operating Environment

The Group remapping utility will run on a SUN platform.

4.12.14.5 Interfaces and Data Types

Table 4.12.14-3 lists the supporting products that this tool depends upon in order to function properly.

Table 4.12.14-3. Interface Protocols

Product Dependency	Protocols Used	Comments
Data Pool database	SQL	Via SQL server machines

4.12.14.6 Special Constraints

The Data Pool Collection-to-Group Remapping utility requires that the “Insert Enabled Flag” be turned off using the Data Pool Maintenance GUI for the source collection prior to running the

utility. If this is not done, the utility will provide an error message to the user indicating this condition and promptly exit. Also the utility expects that the group to which the user is mapping the collection exists in the Data Pool database. In addition, the user is to be aware that the utility does not allow remapping the Browse (Browse.001) collection. Data Pool functionality assumes that the browse collection is always located in the group “BRWS”. Also, the utility doesn’t allow users to map any collection to the BRWS group. The user is given an error message and the utility exits if either of these cases is true. The utility checks to see if the given collection is part of the old or source group. If not, the utility informs the user and exits. The Group Mapping utility runs only if the Data Pool database server is running and if the database is available. It also assumes the stored procedures are present.

4.12.14.7 Outputs

Output of update events and errors will be always appended to a single log file.

4.12.14.8 Event and Error Messages

Usage errors will be displayed to the screen. Processing error messages are written to the log files.

4.12.14.9 Reports

None.

4.12.14.10 Logs

The utility produces a log file called EcDIRemap.log in the /usr/ecs/<mode>/CUSTOM/logs directory. If this log file already exists, the new information will automatically be appended. If there is no existing log file by this name, a new log file with this name will automatically be created.

Since the log file may grow to a considerable size after constant use, it is recommended that it be saved off into a separate file from time to time for maintainability.

4.12.14.11 Recovery

The EcDIRemap.pl utility will be able to recover from aborted runs by using the DIRecoveryParameters table to checkpoint its progress. In the event of an aborted run, the utility will read the recovery parameters table to determine at which point the utility left off when it aborted. This will ensure that remappings that were taking place prior to the abort will finish correctly. After recovery processing takes place, the utility will then process the current run by acting on the latest input parameters. For example, if the original command line was:

```
EcDIRemap.pl OPS -esdt MOD29 -version 4 -oldgrp MOST -newgrp MOSS
```

If this run were aborted and a new invocation of the utility was initiated with a different collection and different source and destination groups as follows:

```
EcDIRemap.pl OPS -esdt AST_L1A -version 3 -oldgrp ASTT -newgrp ASTA
```

Then the utility would give a message to the standard output and log indicating a recovery was in process for remapping MOD29.004 collections from the old group (MOST) to the new group (MOSS) was taking place. As soon as the recovery was finished, the utility would indicate that it would now process the remapping of AST_L1A.003 from the ASTT group to the ASTA group.

4.12.14.12 Sybase Error Handling

If a Sybase error occurs, you will most likely see the actual Sybase error string displayed on the screen and in the log. Some errors can be that the database server is unavailable, that the connection to the database was dropped, or that there was an error executing the stored procedure. In the event of a Sybase-sourced error, the utility will immediately stop running.

In the event that a connection to the Data Pool database can not be established, the utility may repeatedly attempt to connect to the database, depending on how the configuration file was set. If, for example, NUM_RETRIES was set to 5 and SLEEP_SEC was set to 10, this means it will try to connect 5 times, and will wait 10 seconds before each attempt – a total of 50 seconds if all attempts are unsuccessful.

4.12.15 QA Update Utility

The QA Update Utility provides the EMD Operations Staff with a command-line interface to update the QA data for granules in the Data Pool inventory. Both inventory and corresponding XML files on disk will be updated.

The utility operates in two modes, depending on the command-line parameters. It can either read an input file specified on the command-line or a directory containing multiple input files, if no file is specified. Each input file contains a list of granule db ids and the QA updates to be performed for those granules. These files, called “undo” files, are generated by the QAMUT utility in its “undo” directory. Therefore, the QA Update must be run after QAMUT has been run.

Fault recovery capability is also supported allowing continued processing of a partially processed list of QA updates due to a database server fault or an operating system error. When the utility detects un-processed QA updates left over from a previous run it automatically goes into recovery mode to complete processing them.

4.12.15.1 Using the QA Update Utility

The QA Update Utility is started by entering the following command:

> **EcDIQaUpdateStart** <command line parameters>

There are various command line parameters that are used in combination with each other. Table 4.12.15-1 provides a description of these parameters.

Table 4.12.15-1. Command Line Parameters of the QA Update Utility

Parameter Name	Description
-mode <mode>	Specifies the mode of operation. This must be the first parameter passed, and it must be a valid, existing Data Pool mode with a format like OPS or TS1.
-file <filename>	Specifies the file to be used as input to the utility. <filename> is the name of a file containing a list of granule db ids and their QA update information. It must reside in the QAMUT undo directory (see ConfigurationFile table). This parameter is optional. If no -file parameter is provided, the utility will read all undo files in the QAMUT undo directory as input.

There is no required ordered sequence of the parameters except for the <MODE> - this must be first parameter or a fatal error will be returned. The combination of these remaining inputs must be valid. A command line input error results in a ‘usage’ syntax display, and in most cases will also explain why the input was incorrect.

4.12.15.2 QA Update Utility Commands

Below are some examples for invoking this utility:

1. **EcDlQaUpdateStart -mode <mode> -file <file name>**

Updates QA information for the granules provided via *file_name*.

2. **EcDlQaUpdateStart -mode <mode>**

Updates QA information for the granules provided via all undo files in the QAMUT undo directory. See QAMUT documentation for details. This is suitable for running in the background or as a cron job.

4.12.15.3 Required Operating Environment

The QA Update Utility will run on an SGI platform, an acg host.

4.12.15.4 Interfaces and Data Types

Table 4.12.15-2 lists the supporting products that this tool depends upon in order to function properly.

Table 4.12.15-2. Interface Protocols

Product Dependency	Protocols Used	Comments
Data Pool database	SQL	Via SQL server machines

4.12.15.5 Input File Format

All input (undo) files are expected to reside in the QAMUT's undo directory (e.g. /usr/ecs/OPS/CUSTOM/data/DSS/QAMUT/QAMUTUndo) and follow the naming convention and format enforced by the QAMUT. An undo file contains the following fields:

SequenceNo, ShortName, VersionID, **dbID**, LGID, **ParameterName**, **FlagName**, OldQualityFlag, OldQualityFlagExplan, **NewQualityFlag**, **NewQualityFlagExplan**. Only some of these fields are needed by the utility (those in bold) and the others get filtered out before storing them in working tables in the database.

This is an example of two lines from an undo file:

```
2          MOD13A2          1          2002719804
MOD13A2.A2000193.h01v09.002.2000240111936.hdf      1 km 16 days EVI
Quality          Science Failed  OPS EOC 12Hr InFormal Run.030821145017
Failed  OPS EOC 12H Formal Run 082503

3          MOD13A2          1          2002719804
MOD13A2.A2000193.h01v09.002.2000240111936.hdf      1 km 16 days MIR
reflectance      Science Failed  OPS EOC 12Hr InFormal Run.030821145017
Failed  OPS EOC 12H Formal Run 082503
```

4.12.15.6 Configuration File Format – EcDIQaUpdate.properties

The configuration file contains vital details about how to connect to the Sybase database. Without this file, the utility can not run. The configuration file must be a single-entry plain text ASCII file, which has the following format:

```

SYB_USER = <string>
SYB_SQL_SERVER = <string>
SYB_DBNAME = <string>
PGM_ID = <string>
DB_NUM_RETRIES = <integer>
DB_SLEEP_SEC = <integer>
FILE_NUM_RETRIES = <integer>
FILE_SLEEP_SEC = <integer>
NUM_XML_THREADS = <integer>
QAMUT_UNDO_DIR = <string>
LOG_SIZE = <integer>
NUM_LOGS_TO_CYCLE = <integer>
LOG_DETAIL_LEVEL = <level>

```

Breakdown of the individual parameters is shown in Table 4.12.15-3:

Table 4.12.15-3. Configuration File (1 of 2)

Parameter Name	Description
SYB_USER	The user name for the Sybase connection.
SYB_SQL_SERVER	The name of the SQL sever for this Sybase connection.
SYB_DBNAME	The name of the database you intend to connect to
PGM_ID	Program ID used for connecting to the Data Pool database.
DB_NUM_RETRIES	The number of times the utility will attempt to connect to the database before exiting. The recommended default is 5.
DB_SLEEP_SEC	The number of seconds the utility will wait ('sleep') between connection attempts. The recommended default is 10.
FILE_NUM_RETRIES	The number of times the utility will attempt to open an XML file for update before giving up on that file. The recommended default is 5.
FILE_SLEEP_SEC	The number of seconds the utility will wait ('sleep') between XML file open attempts. The recommended default is 10.
NUM_XML_THREADS	The number of threads the utility will use to update QA information in XML files. Maximum of 10.
QAMUT_UNDO_DIR	Name of directory containing QAMUT undo file(s), which are used input to the utility.
LOG_SIZE	Size in bytes of each log. When this size is reached in the first log file, a second log file will be created, and so on, up to NUM_LOGS_TO_CYCLE files.
NUM_LOGS_TO_CYCLE	Number of logs to cycle through. For example, if NUM_LOGS_TO_CYCLE=3, 3 logs will eventually be created, named EcDIQaUpdate.log.0, EcDIQaUpdate.log.1, and EcDIQaUpdate.log.2, with EcDIQaUpdate.log.0 always being the latest.

Table 4.12.15-3. Configuration File (2 of 2)

Parameter Name	Description
LOG_DETAIL_LEVEL	Level of detail of log messages. Can be one of the following: DEBUG – log low-level debug messages DETAILED – log detailed messages INFO – key informational messages WARNING – warning and fatal messages Messages will be generated for the specified level and above, e.g. if DETAILED is specified, all DETAILED, INFO, and WARNING messages will be generated. DEBUG messages will be ignored.

4.12.15.7 Special Constraints

The QA Update Utility runs only if the Data Pool database server is running and if the database is available. It also assumes the stored procedures are present.

4.12.15.8 Outputs

Output of update events and errors will be always appended to the log files.

4.12.15.9 Event and Error Messages

Usage errors will be displayed to the screen. Processing error messages are written to the log files.

4.12.15.10 Reports

None

4.12.15.11 Logs

The utility produces log files in the /usr/ecs/<mode>/CUSTOM/logs directory. Log file behavior is specified by parameters in the configuration file (see Table 4.12.15-3). The logs can be configured to be of a certain size (LOG_SIZE). When the first log reaches that size, a second log is created, and this continues up to the number of logs specified (NUM_LOGS_TO_CYCLE). When all the logs have been filled, the same logs in the rotation are used again (overwritten) in the same order. If any of the log files already exist and are not yet full, the new information will automatically be appended. If there is no existing log file by this name, a new log file with this name will automatically be created. Logs are named EcDIQaUpdate.log.n, where n=0 .. NUM_LOGS_TO_CYCLE.

4.12.15.12 Recovery

The QA Update Utility provides a capability to recover from an execution failure caused by situations such as the system faults or database errors leaving all or some of the QA updates unprocessed. The utility will detect such failure upon the next run and continue processing the QA updates that were left unprocessed in the previous run. The operator is given no choice as to recovery. Recovery will proceed or the Data Pool inventory and disk files will be in a corrupted state.

4.12.15.13 Sybase Error Handling

If a Sybase error occurs, you will most likely see the actual Sybase error string displayed on the screen and in the log. Some errors can be that the database server is unavailable, that the connection to the database was dropped, or that there was an error executing the stored procedure. In the event of a Sybase-sourced error, the utility will immediately stop running.

In the event that a connection to the Data Pool database can not be established, the utility may repeatedly attempt to connect to the database, depending on how the configuration file was set. If, for example, NUM_RETRIES was set to 5 and SLEEP_SEC was set to 10, this means it will try to connect 5 times, and will wait 10 seconds before each attempt – a total of 50 seconds if all attempts are unsuccessful.

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4.12.16 Data Pool Move Collections Utility

The Move Collections Utility provides the EMD Operations Staff with a command-line interface to move collections from one file system to another. The utility requires command-line parameters that specify the collection (shortname and version id) to be moved and the target file system path. The utility also supports a verbose option. This option allow for enabling or suppressing detailed information displayed to the screen and log for the operator. The default is non-verbose, which allows an operator to run the utility as a background process. Fault recovery is also supported, allowing completion of a partially moved collection due to a database server fault or an operating system error.

The utility relies on the fact that symbolic links will be set from the collection's old filesystem to its new filesystem. For example, before a move, a collection might be located here: /datapool/OPS/user/FS1/MOAT/AIRABRAD.007. After invoking the utility with a target filesystem of FS2, it will be moved to /datapool/OPS/user/FS2/MOAT/AIRABRAD.007 with a symbolic link from its old location, i.e. /datapool/OPS/user/FS1/MOAT/AIRABRAD.007



/datapool/OPS/user/FS2/MOAT/AIRABRAD.007

These links will be persistent and allow for backward compatibility via a "shadow directory". The shadow directory will be set up during the transition to StorNext and multiple file systems, as explained in ticket OP_S4_06.

The file system move is implemented as a copy operation to the new collection directory location, followed by removal of the old collection directory and its contents. The utility then establishes a link to the new location in place of the old directory. As a result, existing URL will not be invalidated by the move and no updated URLs need to be exported to ECHO. However, any existing URLs and file pointers will be invalid from the time when the utility starts deleting the existing directories until the time the link is established. During this time:

- A Data Pool ftp user or an EDG user clicking on a URL might experience a temporary error when trying to access files and directories associated with the moving collection. File transfers that are already in progress when deletion begins should complete normally.
- FTP Pull users could experience similar temporary problems when they try to access links in FTP Pull directories that were established by the OMS and that point to granules in the moving collection.
- The PDS may encounter file access errors when using OMS provided file path names for granules in the moving collection.

In addition, the following errors may occur during a collection move:

- During the time a collection is being moved, the Data Pool Web GUI will return an error if a user tries to access the collection via a bookmark. It will flag the collection and not display it as an active link on the collection drill down web page, the temporarily preventing drill down access to the collection.

- The Data Pool insert service will look up the collection path in the Data Pool database during the insert process. The collection path is updated once the copy step is complete. Any Data Pool insert processes that looked up the copy path BEFORE it was updated will insert their granules into the old directory location. If these granules are not copied but then removed, they would become phantoms and could trigger additional errors downstream, e.g., in distribution; alternatively, if they are not removed they would cause the move process to fail, as the Data Pool insert service would re-create the deleted directories.
- The OMS looks up granule file locations immediately before performing an FTP Push operation. If the lookup occurs just before the collection information in the Data Pool database is updated, but the copy operation starts after the file was deleted, the FTP Push operation will fail and cause an operator intervention. Since the time window between file location look up and ftp push start is small, the chances for that occurring are very small. The operator would need to resubmit the request, and since the directory entry will now have been updated, the ftp push operation will succeed.

If the above impacts are not acceptable, operators can suspend inserts and web access for the original file system by marking it as "unavailable" in the DPM GUI. This would also halt staging operations for that file system in OMS. To prevent PDS errors, operators would need to verify before activating an order that it does not reference granules from the collection that is being moved. Operations will need to use a different mechanism to alert FTP users of the unavailability; and to prevent access, operations would need to take other measures, such as changing the directory permissions.

4.12.16.1 Using the Move Collections Utility

The Move Collections Utility is started by entering the following command:

```
> EcDIMoveCollection.pl <mode> -shortname <shortname>
      -versionid <versionid>
      -targetfs <file system path>
```

There are various command line parameters that are used in combination with each other. Table 4.12.16-1 provides a description of these parameters.

Table 4.12.16-1. Command Line Parameters of the Move Collections Utility

Parameter Name	Description
<mode>	An input parameter that specifies the mode of operation. This must be the first parameter passed, and it must be a valid, existing Data Pool mode with a format like OPS or TS1. This parameter is mandatory. Note: The user will be prompted if the utility is run in OPS mode to prevent any accidental loss of data.
-verbose	Directs the utility to run using verbose option. Some information will be displayed to the screen and detailed information will be written to the utility's log. Default is nonverbose. (See Note)
-shortname <shortname>	An input parameter that specifies the shortname of the collection to be moved. This parameter is mandatory.
-versionid <versionid>	An input parameter that specifies the version identifier of the collection to be moved. Do not specify leading zeros. This parameter is mandatory.
-targetfs <file system path>	An input parameter that specifies the relative target file system path to which the collection is being moved. Note that all Data Pool file systems must be mounted under the Data Pool root (e.g. (/datapool/OPS/user)). This parameter is mandatory.

There is no required ordered sequence of the parameters except for the <MODE> - this must be first parameter or a fatal error will be returned. The combination of these remaining inputs must be valid. A command line input error results in a 'usage' syntax display, and in most cases will also explain why the input was incorrect.

4.12.16.2 Move Collections Utility Commands

Below are some examples for invoking this utility:

```
1. EcDlMoveCollection.pl <mode> -shortname MODVOLC
   -versionid 1 -targetfs fs1 -verbose
```

Moves the files, browse links, and inventory information for the collection **MODVOLC.001** from its current directory as specified in the database to the new filesystem **fs1**. The collection will be moved from /datapool/<mode>/user/MOAT to /datapool/<mode>/user/fs1/MOAT. The utility will be run using verbose option, which displays information to screen and to the log.

```
2. EcDlMoveCollection.pl <mode> -shortname MODVOLC
   -versionid 1 -targetfs fs1
```

Same as 1) but in non-verbose mode. No output to the screen and less detail in the log.

4.12.16.3 Required Operating Environment

The Move Collections Utility will run on a SUN platform.

4.12.16.4 Interfaces and Data Types

Table 4.12.16-2 lists the supporting products that this tool depends upon in order to function properly.

Table 4.12.16-2. Interface Protocols

Product Dependency	Protocols Used	Comments
Data Pool database Perl DBI	SQL DBD::Sybase	Via SQL server machines Requires proper install of baselined version of Perl.

4.12.16.5 Input File Format

N/A

4.12.16.6 Configuration File Format – EcDIMoveCollection.CFG

The “config” file contains vital details about how to connect to the Sybase database. Without this file, the utility can not run. The config file must be a single-entry plain text ASCII file, which has the following format:

```

SYB_USER = <string>
SYB_SQL_SERVER = <string>
SYB_DBNAME = <string>
PGM_ID = <string>
NUM_DB_RETRIES=<integer>
DB_SLEEP_SEC=<integer>
NUM_DELETE_RETRIES=<integer>
DELETE_SLEEP_SEC=<integer>

```

See Table 4.12.16-3 for a breakdown of individual parameters.

Table 4.12.16-3. Configuration File Parameters (1 of 2)

Parameter Name	Description
SYB_USER	The user name for the Sybase connection.
SYB_SQL_SERVER	The name of the SQL sever for this Sybase connection.
SYB_DBNAME	The name of the database you intend to connect to
PGM_ID	Program ID used for connecting to the Data Pool database. The value of this parameter must be set to 10000022 for this program.
NUM_DB_RETRIES	The number of times the utility will attempt to connect to the database before exiting. The recommended default is 5.
DB_SLEEP_SEC	The number of seconds the utility will wait ('sleep') between connection attempts. The recommended default is 10.
NUM_DELETE_RETRIES	The number of times the utility will rescan the old collection directory prior to deleting it. If the delete fails, it is most likely because the directory is not empty because some granules were inserted after the move started. The repeated rescanning for these files handles this case. The recommended default is 5.

Table 4.12.16-3. Configuration File Parameters (2 of 2)

Parameter Name	Description
DELETE_SLEEP_SEC	The number of seconds the utility will wait ('sleep') between old collection directory rescans/deletes. The recommended default is 10.

4.12.16.7 Special Constraints

The Move Collections Utility runs only if the Data Pool database server is running and if the database is available. It also assumes the stored procedures are present.

4.12.16.8 Outputs

Output of update events and errors will be always appended to a single log file.

4.12.16.9 Event and Error Messages

Usage errors will be displayed to the screen. Processing error messages are written to the log files.

4.12.16.10 Reports

None

4.12.16.11 Logs

The utility produces a log file called EcDIMoveCollection.log in the /usr/ecs/<mode>/CUSTOM/logs directory. If this log file already exists, the new information will automatically be appended. If there is no existing log file by this name, a new log file with this name will automatically be created.

Since the log file may grow to a considerable size after constant use, it is recommended that it be saved off into a separate file from time to time for maintainability.

4.12.16.12 Recovery

The Move Collections Utility provides a capability to recover from an execution failure caused by situations such as the system faults or database errors leaving all or some of the file moves unprocessed. The utility will detect that an execution failure occurred at startup, whereupon the operator will be prompted as to whether recovery will be attempted or not. If the operator chooses to recover, the utility will complete the processing of file moves that were left unprocessed in the previous run. Upon completion of the recovery, the utility will run again with the current command-line parameters. An operator may not wish to recover (e.g. if the target filesystem has become corrupted or full). In this case, recovery will not be attempted, and the utility will run with the current command-line parameters. The moveFlag will automatically get reset to "N". Any files that were copied to the target file system would have to be manually deleted by the operator.

4.12.16.13 Sybase Error Handling

If a Sybase error occurs, you will most likely see the actual Sybase error string displayed on the screen and in the log. Some errors can be that the database server is unavailable, that the connection to the database was dropped, or that there was an error executing the stored procedure. In the event of a Sybase-sourced error, the utility will immediately stop running.

In the event that a connection to the Data Pool database can not be established, the utility may repeatedly attempt to connect to the database, depending on how the configuration file was set. If, for example, NUM_RETRIES was set to 5 and SLEEP_SEC was set to 10, this means it will try to connect 5 times, and will wait 10 seconds before each attempt – a total of 50 seconds if all attempts are unsuccessful.

4.12.17 Data Pool Hidden Scrambler Utility

The Data Pool Hidden Scrambler utility provides a mechanism by which the ECS Operations Staff can encrypt or re-encrypt the names of Data Pool hidden directories, both on the file system and in the Data Pool database.

The Data Pool Hidden Scrambler utility may be run with either the “transition” option (one time only, when hidden directory names are first created in the database for all Data Pool collections), or the “rename” option (when hidden directory names need to be re-encrypted, either to respond to a security breach, or on a scheduled basis at the DAAC, depending on DAAC security policy). This utility should be run as cmshared, cmanymode, or similar

4.12.17.1 Using the Data Pool Hidden Scrambler Utility

The Data Pool Hidden Scrambler utility should be started by the user cmshared (or similar). The Data Pool Hidden Scrambler utility is started by entering the following command:

```
EcDIHiddenScramblerDataPool.pl <mode> <command line parameters>
```

There are four command line parameters that may be used. Table 4.12.17-1 provides a description of those parameters.

Table 4.12.17-1. Command Line Parameter

Parameter Name	Required	Description
transition	No	This parameter may not be used with any of the other command line parameters. Specifies that the utility should be run with the transition option.
collgroup	No	This parameter may not be used with the “transition” parameter, nor with the “shortname”/“versionid” parameters. Specifies that the utility should be run with the rename option, for all collections in the indicated collection group.
shortname	No	This parameter may not be used with the “transition” parameter, nor with the “collgroup” parameter. It must be used with the “versionid” parameter. Specifies that the utility should be run with the rename option for the indicated collection only.
versionid	No	This parameter may not be used with the “transition” parameter, nor with the “collgroup” parameter. It must be used with the “shortname” parameter. Specifies that the utility should be run with the rename option for the indicated collection only.

The Hidden Scrambler utility performs the following as part of the "rename" processing:

- Generates a new random orderOnlySNDirName and orderOnlyGrpDirName for each requested Collection and Collection Group in the Data Pool, and saves these names to the Data Pool database.

Note: If the collgroup parameter is used then the utility generates a new random orderOnlyGrpDirName for the collection group supplied and generates a new random orderOnlySNDirName for each collection in that collection group. If the shortname and versionid parameters are used, then the utility will only generate a new random orderOnlySNDirName for the specified collection, and save that to the database. If neither the collgroup nor shortname/versionid parameters are used, the utility generates a new random orderOnlyGrpDirName for all collection groups in the mode and generates a new random orderOnlySNDirName for all collections in the mode.

- Creates new hidden directories based on the new orderOnlySNDirName and orderOnlyGrpName for each requested collection.
- Copies all files from the old hidden directories to the newly created hidden directories.
- Updates the FTPpull links for existing orders referencing the old hidden directories, to point to the new hidden directories
- Removes the old hidden directories.
- Reports the time it takes to update the FTPpull links.

The Data Pool Hidden Scrambler utility performs the following as part of the "transition" processing:

- Generates a new random orderOnlySNDirName and orderOnlyGrpDirName for each Collection and Collection Group in the Data Pool, and saves these names to the Data Pool database

4.12.17.1.1 Hidden Scrambler Utility Command Line Examples

1. For a "rename" run:

Note: For a "rename" run, the Hidden Scrambler utility should only be run during Data Pool downtime. The script must be run with a user account with privileges to rename directories on the Data Pool.

```
EcDlHiddenScramblerDataPool.pl OPS
```

The Hidden Scrambler Utility will perform rename processing for all collection groups and all collections in the Data Pool in OPS mode.

```
EcDlHiddenScramblerDataPool.pl OPS -collgroup MOAT
```

The Hidden Scrambler Utility will perform rename processing for the MOAT collection group and for all collections in the MOAT collection group, in OPS mode.

```
EcDlHiddenScramblerDataPool.pl OPS -shortname AST_L1B -versionid 3
```

The Hidden Scrambler Utility will perform rename processing only for the AST_L1B.003 collection in OPS mode. (Note that the corresponding collection group (ASTT) hidden directory name will not be re-encrypted).

2. For a "transition" run:

Note: Transition may be used while Data Pool is up. It should be used only once, the first time the utility is run in any given mode.

EcDIHiddenScramblerDataPool.pl TS1 -transition

The Hidden Scrambler Utility will generate encrypted directory names for all Data Pool collections and collection groups in TS1 mode, and save the names in the Data Pool database.

4.12.17.2 Hidden Scrambler Configuration File

The Data Pool Hidden Scrambler utility uses a configuration file, EcDIHiddenScrambler.CFG, located in /usr/ecs/<mode>/CUSTOM/cfg directory. The configuration parameters are stored in a PARAMETER = VALUE format with each parameter/value pair as a separate line entry in the file. Table 4.12.17-2 describes the configuration parameters.

Table 4.12.17-2. Configuration Parameters

Parameter Name	Value Description
SYB_USER	Sybase login name for the user of the Data Pool database.
SYB_SQL_SERVER	Name of Sybase SQL Server hosting Data Pool database.
SYB_DBNAME	Name of Data Pool database.
PGM_ID	Program identifier used as seed to generate database password.
NUM_RETRIES	Number of times database operation will be attempted.
SLEEP_SEC	Number of seconds between retries.
PULL_DIR	Location of the FTP Pull Directory in appropriate mode. NOTE: Be sure to use the full path to the FTP Pull Directory, not a linked path (e.g. /datapool/<mode>/user/<fs>/PullDir).

4.12.17.3 Data Pool Hidden Scrambler Utility Main Screen

The Data Pool Hidden Scrambler Utility does not have a main screen. It has a command line interface only.

4.12.17.4 Required Operating Environment

The Hidden Scrambler Utility will run on a SUN platform.

4.12.17.5 Databases

Table 4.12.17-3 lists the supporting products that this tool depends upon in order to function properly.

Table 4.12.17-3. Product Dependencies

Product Dependency	Protocols Used	Comments
Data Pool database	SQL	Via SQL server machines

4.12.17.6 Special Constraints

The Data Pool Hidden Scrambler utility runs only if the Data Pool database server is running and if the database is available. It also assumes the stored procedures are present.

With the rename option, the utility must be run during Data Pool downtime.

The utility should only be run once with the transition option, the first time the utility is run in any given mode.

4.12.17.7 Outputs

Output of update events and errors will be always appended to a single log file.

4.12.17.8 Event and Error Messages

Usage errors will be displayed to the terminal screen. Processing error messages are written to the log files.

4.12.17.9 Reports

None.

4.12.17.10 Logs

The utility produces a log file called EcDIHiddenScrambler.log in the /usr/ecs/<mode>/CUSTOM/logs directory. If this log file already exists, the new information will automatically be appended. If there is no existing log file by this name, a new log file with this name will automatically be created.

Since the log file may grow to a considerable size after constant use, it is recommended that it be saved off into a separate file from time to time for maintainability.

4.12.17.11 Recovery

The Data Pool Hidden Scrambler Utility provides a capability to recover from interruptions caused by situations such as the system faults or database errors leaving all or some of the directories unprocessed. The utility will detect such failure upon the next run and continue processing the directories and files that were left unprocessed in the previous run. The operator is given no choice as to recovery. Recovery will proceed so that the Data Pool inventory and disk files will not be left in a corrupted state.

4.12.17.12 Sybase Error Handling

If a Sybase error occurs, the actual Sybase error string will most likely be displayed on the screen and in the log. Possible errors include that the database server is unavailable, that the connection to the database was dropped, or that there was an error executing a stored procedure. In the event of a Sybase-sourced error, the utility will immediately stop running.

In the event that a connection to the Data Pool database cannot be established, the utility may repeatedly attempt to connect to the database, depending on how the configuration file was set. If, for example, NUM_RETRIES was set to 3 and SLEEP_SEC was set to 10, the utility will try to connect to the database 3 times, and will wait 10 seconds between each attempt – a total of 30 seconds if all attempts are unsuccessful.

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4.12.18 OWS Binding Utility

The OWS Binding Utility (EcBmOwsBinding) exports to ECHO two pieces of metadata, WmsUrl and WcsUrl, which carry OWS service readiness information for individual granules that are newly enabled for OWS services (WMS and WCS, respectively). Before running the OWS Binding Utility, the collections to which any OWS enabled granules belong must be exported to ECHO with OWS attributes. Second, individual granule metadata for any OWS enabled granules must be exported to ECHO. Each of these tasks is performed by the Bulk Metadata Generation Tool (BMGT).

4.12.18.1 Using the OWS Binding Utility

The OWS Binding Utility is executed via a start script (EcBmOwsBindingStart, located in the /usr/ecs/<mode>/CUSTOM/utilities directory), which takes no command line parameters. This runs on the OWS box xxogp01.

4.12.18.2 OWS Binding Utility Configuration File

The OWS Binding Utility uses a plain-text ascii configuration file EcBmOwsBinding.properties that specifies name-value pairs in the form:

```
from.email.host = g0ins02.gsfc.ecs.nasa.gov
```

The properties are listed in the Table 4.12.18-1..

Table 4.12.18-1. OWS Binding Utility Configuration Parameters (1 of 2)

Parameter Name	Description
mode	Mode in which the App is running: OPS,TS1,TS2
application.name	Application name, EcBmOwsBinding
log.operations.level	Logging level for ops log
log.performance.level	Logging level for perf log
log.debug.level	Logging level for debug log
log.override	Specified if logs are to be overwritten
log.threshold	Maximum file size of a log before it is overwritten
log.rotation.number	Maximum rotation number for logging
sybase.jdbc.driver	Driver for Sybase connection
sybase.url	URL for Sybase connection
application.id	Application ID for EcBmOwsBinding, 15000003
sybase.username	Username for Sybase, EcBmOwsBinding
sybase.password	Encrypted Sybase password (see instructions below)
from.email.address	From EMAIL address for email to ECHO contact
from.email.host	Hostname for email to ECHO contact
to.email	ECHO contact email address
datacenter.name	Data center name (for example, PVC)
dtd.location	Location of DTD

Table 4.12.18-1. OWS Binding Utility Configuration Parameters (2 of 2)

Parameter Name	Description
dtd.filename	Name of DTD
socks.proxy.host	SOCKS proxy host for email client
socks.proxy.port	SOCKS proxy port for email client
ftp.user	FTP user to use for FTPing file to ECHO
ftp.password	Encrypted FTP password (see instructions below)
ftp.destination	Destination path for FTPing file to ECHO
ftp.retry	Number of retries when FTPing
ftp.wait	Sleep time between retries
ftp.dest.host	Hostname to FTP to
ftp.port	Port for FTP
ftppull.dir	Directory to move files ECHO is supposed to FTP pull
output.directory	Directory to write output to
remove.output.flag	true or false (case sensitive). If true this will archive it's products in the configured ftp pull directory after successful ftp to ECHO
base.url	OWS base URL (see instructions below)
test	For testing retry condition
test.host	For testing retry condition
test.user	For testing retry condition
validate.always	true or false (case sensitive). For turning on explicit DTD validation (testing parameter). Defaults to false.
field.names.<ESDT>	A series of parameters that configure default field names for various ESDTs, specified as ShortName.VersionID where VersionID is a 3 digit number.

This application uses an encryption mechanism to securely store FTP and Sybase passwords in configuration files. This encrypted password is to be generated by running the following command on the DOWS host xxogp01

```
/usr/ecs/<MODE>/CUSTOM/utilities/EcBmOwsBindingEncryptPassword password
```

ECS Assist will run this in the background and store the encrypted passwords if the clear passwords are specified in the configuration parameters window. Sybase password is to be generated by running EcDIDcrp (in /usr/ecs/<MODE>/CUSTOM/bin/DPL) on a sun machine using the ApplicationID and Username specified above this:

```
EcDIDcrp <MODE> <Username> <ApplicationID>
```

4.12.18.3 Required Operating Environment

The OWS Binding Utility runs on a Linux platform.

4.12.18.4 Interfaces and Data Types

Table 4.12.18-2 lists the supporting products that this tool depends upon in order to function properly.

Table 4.12.18-2. Interface Protocols

Product Dependency	Protocols Used	Comments
Data Pool database	SQL	Via SQL server machines
JWSDP	COTS	Requires baselined version of COTS JWSDP
IBM Ftp Bean	COTS	Requires baselined version of FtpBeans
Java Activation Framework	COTS	Requires baselined version of JAF

4.12.18.5 Special Constraints

The OWS Binding Utility runs only if the Data Pool database server is running and if the Data Pool database is available. It also assumes the stored procedures are present.

4.12.18.6 Outputs

The utility exports Data Pool information to ECHO in a file called <DAAC>OWSGranules.<datetimestamp>.xml

If remove.output.flag is set to true in configuration file, the XML output file generated is moved from the configured ProductOutput directory to the configured FTP Pull directory upon successful FTP push.

A sample EcBmOwsBinding output is shown below:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE ProviderAccountService SYSTEM
"http://p0ins02.pvc.ecs.nasa.gov:2241/BMGTUpdateMetadata.dtd">
<ProviderAccountService>
  <UpdateMetadata>
    <Granule>
      <Target>
        <ID>SC:MOD09A1.004:13728</ID>
        <ProviderLastUpdateDateTime>2005-05-25
13:13:12.592</ProviderLastUpdateDateTime>
        <SaveDateTimeFlag>
          <DONTSAVE/>
        </SaveDateTimeFlag>
      </Target>
    <Add>

<QualifiedTag>AdditionalAttributes/AdditionalAttribute/AdditionalAttributeNam
e</QualifiedTag>
      <MetadataValue>WcsUrl</MetadataValue>
    </Add>
  <Add>

<QualifiedTag>AdditionalAttributes/AdditionalAttribute[AdditionalAttributeNam
e="WcsUrl"]/AdditionalAttributeValue</QualifiedTag>

<MetadataValue>http://f3ogp01:8088/dev06/coverage/OWS?SERVICE=WCS&VERSION
=1.0.0&REQUEST=GetCoverage&CRS=EPSG:4326&FORMAT=GeoTIFF&COVER
AGE=SC:MOD09A1.004:13728&FIELDS=sur_refl_b01</MetadataValue>
```

```

        </Add>
        <Add>

<QualifiedTag>AdditionalAttributes/AdditionalAttribute/AdditionalAttributeName</QualifiedTag>
        <MetadataValue>WmsUrl</MetadataValue>
        </Add>
        <Add>

<QualifiedTag>AdditionalAttributes/AdditionalAttribute[AdditionalAttributeName="WmsUrl"]/AdditionalAttributeValue</QualifiedTag>

<MetadataValue>http://f3ogp01:8088/dev06/coverage/OWS?REQUEST=GetMap&VERSION=1.1.1&SRS=EPSG:4326&FORMAT=image/jpeg&LAYERS=SC:MOD09A1.004:13728&STYLES=</MetadataValue>
        </Add>
        </Granule>
        </UpdateMetadata>
</ProviderAccountService>

```

4.12.18.7 Event and Error Messages

Error messages are written to the log files.

4.12.18.8 Reports

None

4.12.18.9 Logs

The OBU will use the EMD java process framework. It uses several log files: EcBmOwsBinding.ops.log, EcBmOwsBinding.debug.log, and EcBmOwsBinding.perf.log, which contain new operational, debug, and performance related information, respectively. When the OBU starts an existing log file will be overwritten or archived into a separate file within the same directory with the following format: <log file name>.MMDDYYHHMMSSMsMsMs. If there is no existing log file, a new log file will automatically be created. The configuration file will determine which logs are used, where the logs are located, and if logs are overwritten or archived.

The log files may grow to a considerable size after constant use and will be archived into a separate file for maintainability in correspondence to the format described above.

4.12.18.10 Recovery

The OWS Binding utility does not perform automatic recovery operations. If the log file indicates that the utility failed to run to successful completion, the utility should be reinvoked. It will pick up the missed granules on the next run.

4.12.18.11 Sybase Error Handling

If a Sybase error occurs, the actual Sybase error string will be displayed in the log. Possible Sybase errors include the database server is unavailable, that the connection to the database was

dropped, or that there was an error executing the stored procedure. In the event of a Sybase related error, the utility will immediately stop running.

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4.12.19 Operability GUI

The Operability GUI consists of two major parts: the Vital Stats GUI and the Action Thread Runner.

The Vital Stats GUI provides an operator interface to view and monitor the overarching health of the ECS system through a series of tables and line graphs displaying data from SSS, SDSRV, DDIST, Ingest, PDPS, OrderManager, and DPL. It comes with the following features:

- Real-time status monitoring of the system
- Post-analysis of Vital Stats data
- Configurable yellow and red thresholds displayed right on the screen on both the line-graph and table outputs
- E-mail notification system to alert the user of data passage into thresholds
- Viewing of the actual Vital Stats script with filtering options so that only desired tables are displayed

The Action Thread Runner is an extension of the Operability GUI which is designed to allow the easy addition of other methods of status reporting, specifically DUEs. As more system analysis scripts are developed, operators at the DAACs will be able to add them to the Action Thread Runner through the GUI interface.

The Action Thread Runner allows the user to install multiple actions or executables to be initiated on specified days and times, with an interval between executions. It displays when a script is run and then analyzes the output or exit status of the script to determine if it terminated with a success or failure. Along with a report of the failed/success status of a script, the operator is also able to view the output of the script at a click of the button. A button is attached to each failed/success line printed so the operator can go back to any point in the run and view the output of the script without disrupting the execution of subsequent scripts or the Thread Runner itself. It comes with the following features:

- Reports the success/failure of each script after it runs
- Runs user-defined actions when a script fails
- E-mail notification system for failures
- Allows the user to view a script's output at the click of a button for any of its executions during a run

4.12.19.1 Quick Start Using the Operability GUI

Bring up the Web Browser and then access the URL for the Operability GUI web page.

For example, <http://p2ins02.pvc.ecs.nasa.gov:19001/cgi-bin/EcMsOpGui.pl>

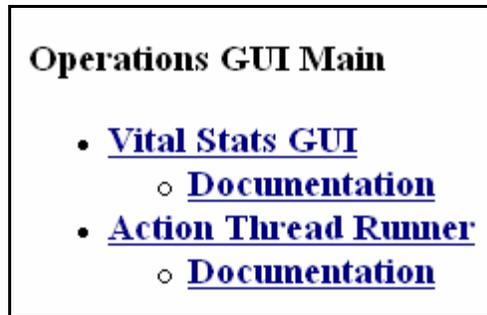


Figure 4.12.19-1. Main GUI Page

4.12.19.2 The Vital Stats GUI

To access the Vital Stats GUI, click on the "Vital Stats GUI" link. This redirects the user to the Vital Stats GUI Main Page. On the first load, the user will be redirected to the Path/Address Options page. (See 4.12.19-2)

Please Verify Directory Information

Mode

Set Paths According to Mode

- This does not include web addresses. These must be set manually according to how your server was set up
Disable:

Path of the VitalStats Data File

-If the path you supply ends in a "/", the GUI will locate today's output in the supplied directory. Otherwise it will assume you are supplying the path to a specific data file. The data files will be stored in `/usr/ecs/$MODE/CUSTOM/data/MSS`.

Path of the VitalStats script

-The VitalStats script can be found at `/usr/ecs/$MODE/CUSTOM/utilities/EcMsOpVitalStats.pl`

Path of the images directory for storing graphs:

- This should be `/usr/ecs/$MODE/CUSTOM/WWW/MSS/docs/images`. If you change the directory, make sure to modify your server to point to the new directory.

Path of the cgi-bin directory:

-The cgi-bin directory can be found at `/usr/ecs/$MODE/CUSTOM/WWW/MSS/cgi-bin/EcMsOpGui`
-Note: Configurations files MUST be saved in a 'cfg' subdirectory of this directory

Web address of the cgi-bin directory:

Web address of the images directory:

- An docs alias will have to be set up on your server pointing to the images directory.

Figure 4.12.19-2. Path/Address Options Page the Appears On First Load of the GUI

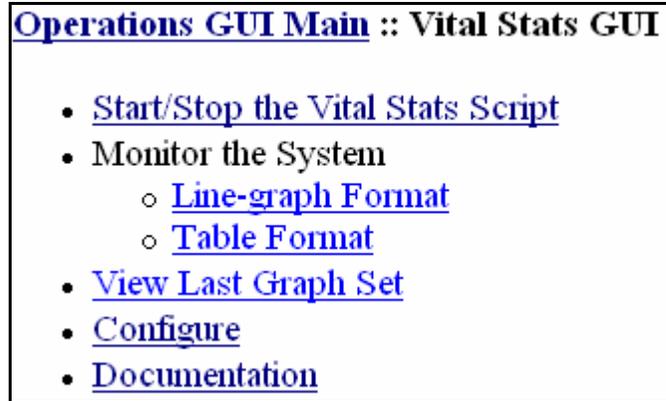


Figure 4.12.19-3. Vital Stats GUI Main Page

4.12.19.3 The Vital Stats Script

The entire Vital Stats GUI is based upon the information that is generated by the EcMsOpVitalStats.pl script. All of the output is taken, parsed, and translated into graphs and tables wherein data can be easily analyzed and the user can be quickly alerted of problems. It can be started from this link to once every X seconds, depending on the interval you provide. The minimum is 120 seconds. Anything below this might affect the system unnecessarily.

This script runs and checks the states of requests in various databases across the ECS system. It does not check the status of searches through the V0 gateway. It does not check the status of requests in the DsStGenericRequest table. It is able to give a user an idea of throughput through the system and identify potential bottlenecks as they occur.

4.12.19.4 Running the Vital Stats Script

The Vital Stats script can be run either from the command line or via the Start/Stop the Vital Stats Script link from the Vital Stats GUI. The command-line usage is as follows: EcMsOpVitalStats.pl MODE [-sleep]. If the -sleep option is not selected the script will run only once. Otherwise the script should be set to run in the background and its output redirected to a file, because it will run until halted, producing output from the current status of the system every seconds. The script should not be run more often than every 120 seconds.

To run the script from the GUI, click on the "Start/Stop Vital Stats" link from the Vital Stats GUI Main Page. A page will appear letting the user know whether or not the script is running in the mode the GUI is currently configured to. If the script is not running, the user is able to enter a sleep interval and start the script running in the background. If the script is running, the user can halt the script by clicking the "Stop Script" button.

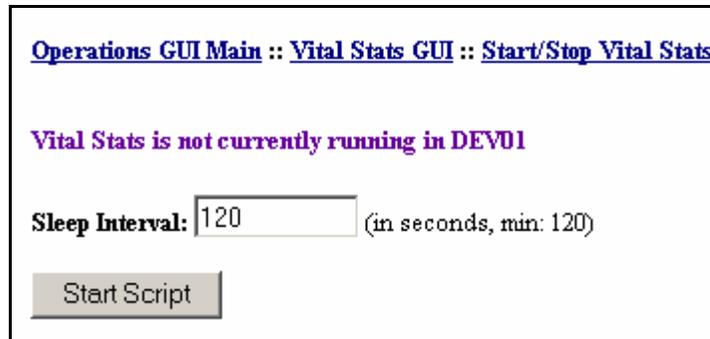


Figure 4.12.19-4. The Start/Stop Vital Stats Page

4.12.19.4.1 Sample Vital Stats Script Output

```

Tue May 20 09:29:27 EDT 2003
SSS Action Queue:          -1
SSS Event Queue:          0
SSS Event Count:          256
PLS Notifications:        6
SDSRV States:
state Request Total
-----
    3              34
    7              1901

status Notifier Total
-----
    0              4
    1              2774

PDPS States:
completionState Total
-----
SUCCESS              5

DDIST States:
State                Total
-----
Active                23
Pending               591
Shipped               527
Staging               57
Suspended With Error  1
Transferring          21

INGEST States:
DataGranuleState     Total
-----
Archiving             16
New                   18
Preprocessing         4

```

Successful 391

[Granules / minute over hour]: 43

[Granules / minute, five mins]: 43

ORDER MANAGER States:

Req Tot: Type: Mode:

```
-----  
      12 D      S4  
      63 N      S3  
     673 N      S4  
       5 PL     S4  
      87 V     NULL
```

Intvsn Total:

```
-----  
      665
```

Gran Tot: Type:

```
-----  
      1 GS
```

Done [5 mins]: Type: Status:

```
-----  
      5 D      70  
     10 GS     70  
      6 N      70
```

TS1 DATAPOOL Action Queue Status

```
---SSS Inserts--- Total  
-----  
FAILED 344  
---OMS Inserts--- Total  
-----  
FAILED 5
```

4.12.19.4.2 Detailed Analysis of Sample Output

- **SSS Queue Sizes:** the SSS queue sizes are just that, although due to the way the queue identifiers are stored, a queue size of -1 actually means 0. The event queue are notifications that SSS has yet to work off, and the action queue are effectively notifications that have been worked off, and have been determined to match an existing subscription. The SSS Event Count reports the number of new event in the last hour.
- **PLS notifications:** events arriving from EcSbSubServer to PDPS via SRF, that have not yet been worked off by the EcPISubMgr. If this queue gets large, many DPRs may not get scheduled until long after their inputs are ready. This queue can be re-ordered if necessary to facilitate priority processing.
- **SDSRV states:** this shows the states of the asynchronous acquires in SDSRV. The states are as follows: 2 - queued, 3 - processing, 4 - failed retryable, 5 & 6 - failed, and 7 - request completed successfully. The notifier states are much simpler: 0 - not yet sent to EcSbSubServer, 1 - sent to EcSbSubServer.

- **PDPS states:** the states of any DPRs current in PDPS. In our sample, there were only 5 and they were all finished successfully.
- **DDIST states:** the number of requests at each state in DDIST. Much of this can be gleaned from the GUI, but this gives a raw number. For a crude measure of distribution performance, the number shipped maps to the aging threshold. e.g. with an aging threshold of fifteen minutes, our sample shipped 527 requests in 15 minutes.
- **INGEST state:** the count of requests against the various states in INGEST. These counts are obtained from the InRequestProcessingData table.
- **Granule rate:** returns two raw numbers obtained from the Science Data Server inventory which tell how many granules were ingested on average per minute over the last hour and over the last five minutes.
- **OM Request Total:** This first section checks the OmActionQueue for unfinished actions mapped to requests, and then totals up the actions for those requests and also tabulates the processing mode for those requests.
- **OM Intervention Total:** This section checks for requests in the intervention tables which have entries in the OmactionQueue. This is not the total number of interventions, but gives you a quick snapshot of rapidly escalating current problems.
- **Granule Total:** This simply checks the OmActionQueue for unfinished actions mapped exclusively to granules. This is an indication of how many granule actions are outstanding, and may give hints as to when archive queues are getting overloaded.
- **Done [5 mins]:** This tracks all actions that completed in the last five minutes, their type and what kind of completion code they had on exit. This tells you if OMS is completing actions in a timely manner.
- **Datapool action queue status:** a count of actions at various states in the DLIInsertActionQueue table. This table is populated with those insert actions which have not been removed by cleanup (done on a set retention period for completed requests) or manually (as is required with failed inserts). SSS Inserts returns actions where the subscription ID is greater than 0. OMS Inserts returns actions where the subscription ID equals -1.

4.12.19.4.3 Detailed Explanation of Activity

This script gives a user a lot of information in a very consolidated format. "Things" to watch include the granule rate, the number shipped, and the SSS queues. These are important, because if any queue gets large, or the ingest rate or distribution rate drop, overall throughput will degrade. We can see a problem when requests get queued up in any non-terminal state on any queue in the system. For example, if we saw a large number of requests in SDSRV at state 2, we'd suspect that STMGT staging disk server was having problems, since all SDSRV does is get a staging disk, and write the metadata out before passing the request off to DDIST. If we saw a large number of requests in Ingest in the new state, but few to none in the other states, we'd go look and make sure all granule servers were healthy. If we saw the notifier queue in SDSRV getting large (over 2000), we'd go and check the health of the EcSbSubServer and make sure it had enough database connections configured. If the number shipped in 15 minutes drops below

200, we go start looking at DDIST and STMGT. If the number ingested in our minutely average dips below 30, we'll go look at the archive servers. To do this investigation we might use the other Operability scripts - the StmgtMonitor, or the Ingest scripts.

4.12.19.5 Monitoring the System

The system monitoring links found on the Vital Stats GUI Main Page display all the information collected by the Vital Stats script on either today or a previous day specified in the configuration options. Line-graph Format draws the information in a series of colorful line-graphs. Table Format prints the information as it appears in the data file produced by Vital Stats, and also outputs the most recent information collected in a table beside the data file output.

4.12.19.6 Monitoring the System – Line-graph Format

Click on the "Line-graph Format" link from the Vital Stats GUI Main Page. This will cause a series of line graphs to be drawn based upon the current configuration options. Drawing the graphs can take a reasonable amount of time depending upon the speed of the box the GUI is stored on. Fortunately, the page will only be absent of graphs at the very beginning of your monitoring, when a "Loading..." page will appear. After that, the graphs will be drawn in the background and will appear new only after the generator has finished. This causes about a two minute delay in viewing up-to-date information. If this is a problem, use the graphs more for diagnosis purposes and use the Table-format Monitoring for real-time monitoring.

To save time, the user may wish to view the last set of graphs generated. He can do this by clicking on the "View Last Graph Set" link from the Vital Stats GUI Main Page.

Operations GUI Main :: Vital Stats GUI :: Monitor System - Graph Format

Select Graph Set: [[All](#)] [[SSS](#)] [[SDSRV](#)] [[DDIST](#)] [[INS](#)] [[PDPS](#)] [[OMS](#)] [[DPL](#)]

Loading...

Figure 4.12.19-5. Initial Graph-Format Monitoring Page

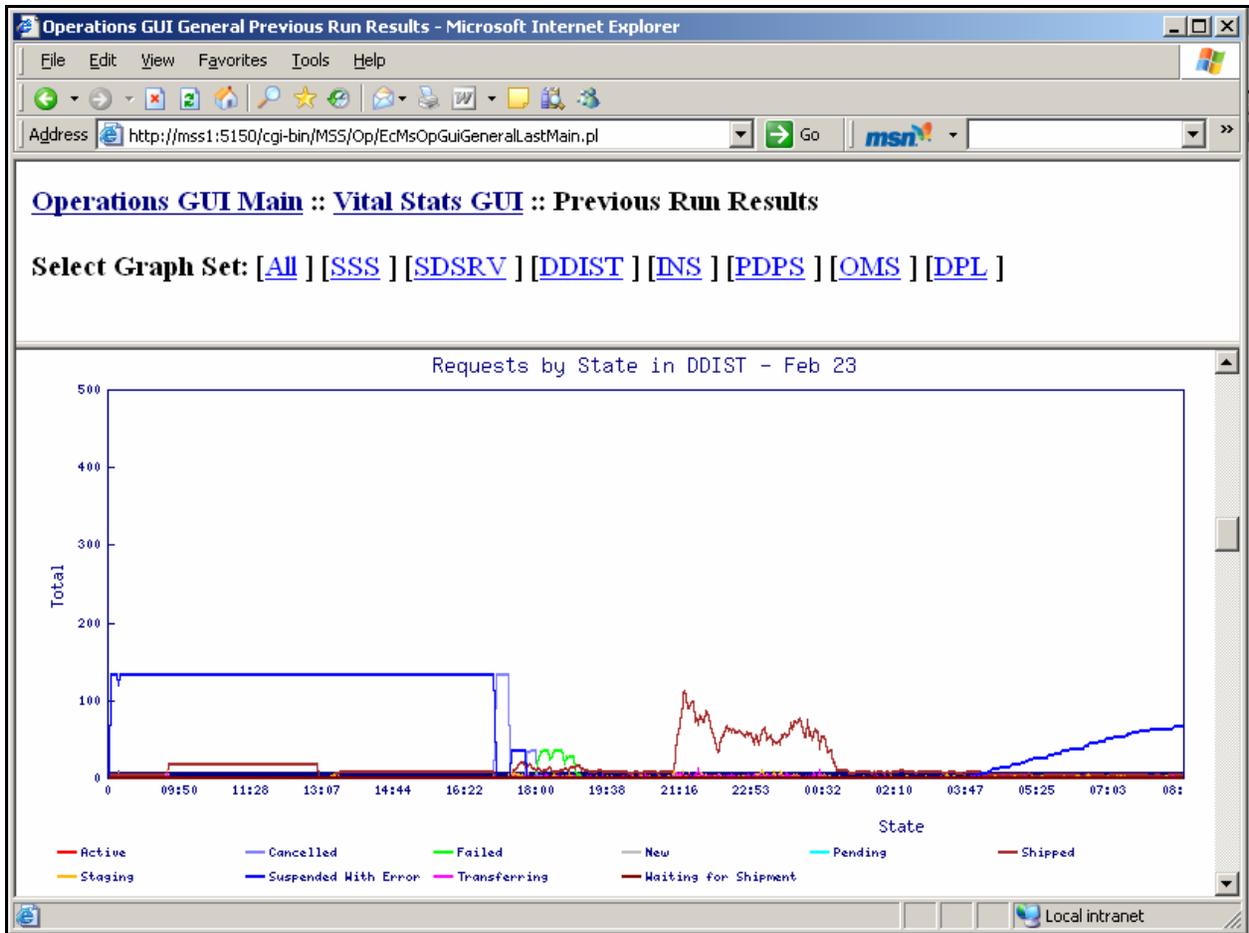


Figure 4.12.19-6. Graph-Format Monitoring Page

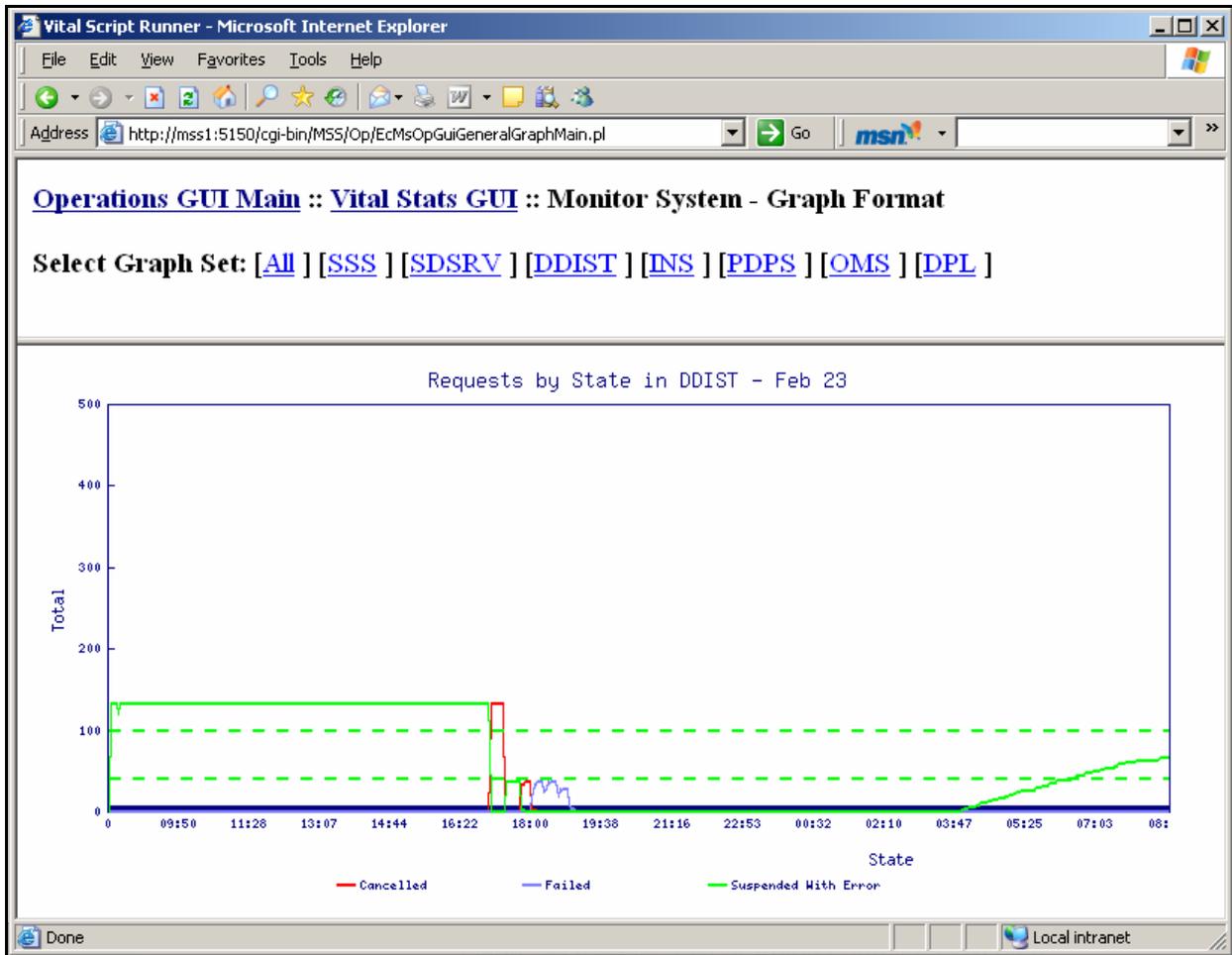


Figure 4.12.19-7. Graph-Format Monitoring Page with Thresholds Set and Data Types Disabled

4.12.19.7 Monitoring the System – Table Format

Click on the "Table Format" link from the Vital Stats GUI Main Page. This page displays the Vital Stats output file as both a table and as the regular output from the file, except that the output is modified to filter out information from tables that have been disabled. The table on the right contains all of the latest data collected about the system. It highlights each table wherein a data point has passed into a threshold. The table also replaces obscure identifiers (such as SDSRV State – 7) with their actual meaning (SDSRV State - Request Completed Successfully).

Vital Stats Data File Monitor - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://mss1:5150/cgi-bin/MSS/Op/EcMsOpGuiGeneralLogMain.pl

Operations GUI Main :: Vital Stats GUI :: Monitor System :: Table Format

292 D S4

Intvsn Total:

43

Gran Tot: Type:

Done [5 mins]: Type: Status:

TS1 DATAPOOL Action Queue Status

---SSS Inserts--- Total

COMPLETE 3953
FAILED 76206

---OMS Inserts--- Total

COMPLETE 2808
FAILED 77755

Tue Feb 24 08:43:15 EST 2004

SSS Queue Sizes		Subscribed Production Jobs Queued in PDPS		Rate of Granule Processing in SDSRV	
SSS Action Queue	-1			[Granules / minute over hour]	0
SSS Event Count	6			[Granules / minute, five mins]	0
SSS Event Queue	-1				
SDSRV Acquires Queued for EcSbSubServer		Total Acquires by State in SDSRV - Notifier States		Requests by State in DDIST	
State	Request Total	Status	Notifier Total	State	Total
Request Completed Successfully	126	Sent to EcSbSubServer	9462	Suspended With Error	66
Requests by State in INGEST		DPRs by State in PDPS		States of Entries in Order Manager by Request Total	
DataGranuleState	Total	completionState	Total	Type/Mode	Request Total
New	331	CQ_RELEASE	1	Distribution S4	292
		FAILEDPGE	588		
		JIL_FAILUR	30		
		ON_QUEUE	3		

Done Local intranet

Figure 4.12.19-8. Table Format Monitoring Page with Thresholds Set

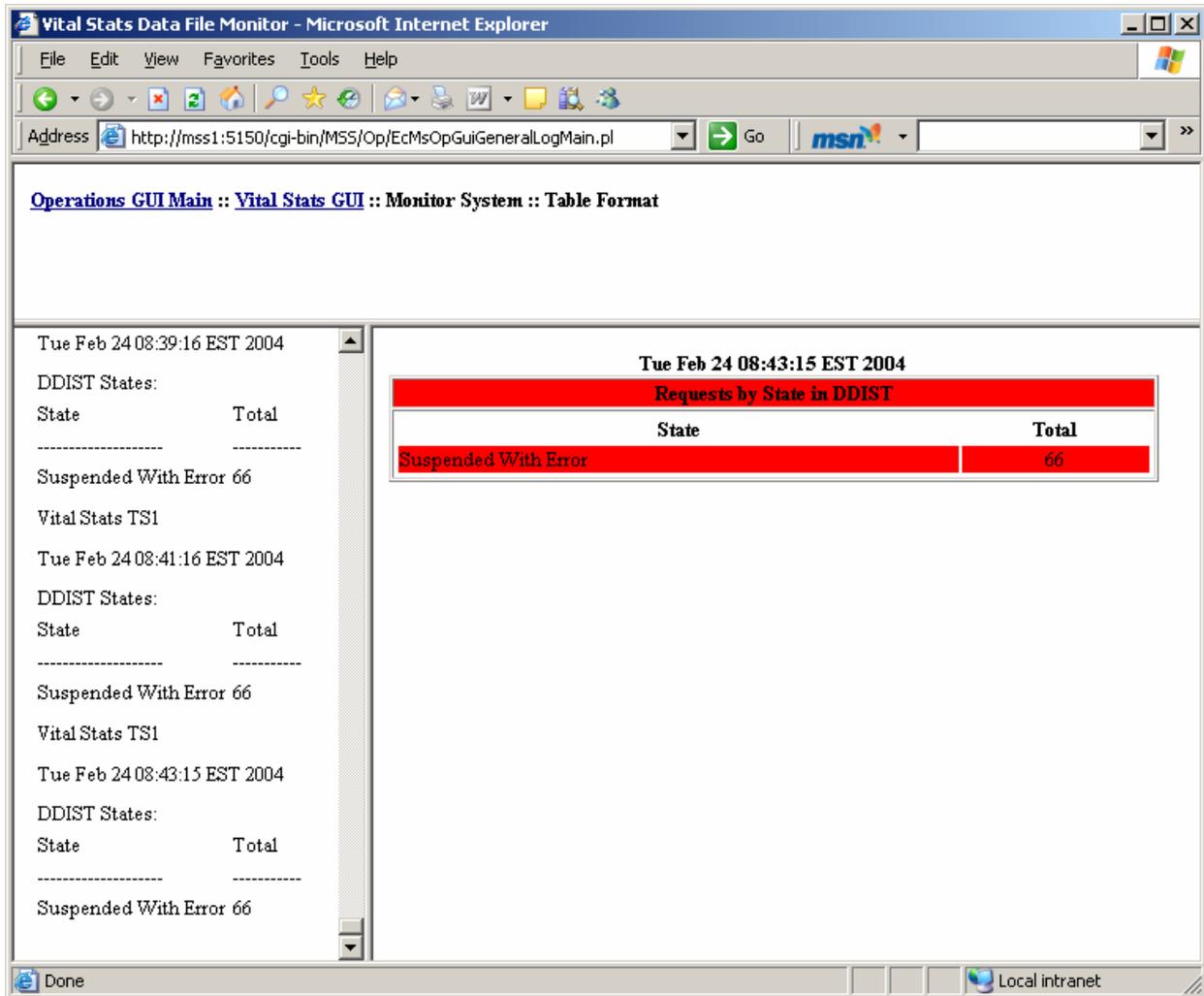


Figure 4.12.19-9. Table Format Monitoring Page with Thresholds Set and Data Types Disabled

4.12.19.8 Configuring the Vital Stats GUI

There are numerous display options which enable the user to view exactly the data he wants to see. The user can disable whole table sets or even individual table elements, set up e-mail notifications for when a data element passes into a configurable threshold, and a variety of other options.

It is advisable to set configuration parameters first before beginning to monitor the system. Click on the "Configure" link from the Vital Stats GUI Main Page. This directs you to the Main Configuration Options Page.

Operations GUI Main :: Vital Stats GUI :: Configuration

- [Graph-format Monitoring Options](#)
- [Table-format Monitoring Options](#)
- Dataset-specific Monitoring Options
 - [Spatial Subscription Server](#)
 - [Science Data Server](#)
 - [Data Distribution Server](#)
 - [Ingest Subsystem](#)
 - [Production And Planning Subsystem](#)
 - [Order Management Subsystem](#)
 - [Data Pool Subsystem](#)

- [General Options](#) (style & notification defaults)

- [Path/Address Options](#)

Save/Load Current Monitoring Configuration Parameters

(Stored in '/home/cmshared/Wz/cgi-bin/MSS/Op/cfg/')

Figure 4.12.19-10. Vital Stats GUI Main Configuration Options Page

4.12.19.9 Graph-format Monitoring Options

Click on the "Graph-format Monitoring Options" link from the Main Configuration Options Page. This page allows the user to customize how he will monitor the system in Line-Graph Format.

Automatically reload the browser after a given interval

Enable:

Reload Interval (seconds):

Run Vital Stats script via the browser

- You do not need to select this if you've started the script from the Start/Stop Vital Stats page. This is used if you want to have the script run right before the graphs are redrawn, otherwise the graphs might be a few minutes behind the script.

- If the script is already running in the background, it will not be run from the browser, even with this selected.

Enable:

Graph Size (in pixels)

Width:

Height:

Graph Output

-By disabling a graph, the graph data will not be stored or output

SSS Queue Sizes

Disable:

SDSRV Acquires Queued for EcSbSubServer

Disable:

Total Acquires by State in SDSRV - Notifier States

Disable:

Rate of Granule Processing in SDSRV

Disable:

Requests by State in DDIST

Disable:

Requests by State in INGEST

Disable:

DPRs by State in PDPS

Disable:

Subscribed Production Jobs Queued in PDPS

Disable:

States of Entries in Order Manager by Request Total

Disable:

OM Intervention Total

Disable:

Total Granules per Type in Order Manager

Disable:

Done [5 mins] per Type and Status in Order Manager

Disable:

Status of Datapool Action Queue - SSS Inserts

Disable:

Status of Datapool Action Queue - OMS Inserts

Disable:

Figure 4.12.19-11. Graph-format Monitoring Options Page

Table 4.12.19-1. Graph-format Monitoring Options

Field Name	Data Type	Size	Entry	Description
Enable Automatic Reload	checkbox	n/a	Optional	keeps the graph display updated with the most recent information collected about the system
Automatic Reload Interval	Int	120	Optional	The frequency of the automatic reload function
Run Vital Stats script via the browser	checkbox	4	Optional	If the Vital Stats script is not currently running, the user can select this option to run the script in sync with the reloading of the graphs. This ensures that the graphs contain the most up-to-date information possible.
Graph Width	int	750	Optional	Sets the width of all graphs
Graph Height	int	350	Optional	Sets the height of all graphs
Graph Output	checkboxes	n/a	Optional	Allows the user to disable any graph he would not like to monitor. Any selected graph will not be displayed during Graph-Format Monitoring

4.12.19.10 Table-format Monitoring Options

Click on the "Table-format Monitoring Options" link from the Main Configuration Options Page. This page allows the user to customize how he will monitor the system in Line-Graph Format.

Automatically Reload the Browser After a Given Interval

Enable:

Reload Interval (seconds):

Run Vital Stats script via the browser

- You do not need to select this if you've started the script from the Start/Stop Vital Stats page. This is used if you want to have the script run right before the tables are reloaded, otherwise the tables might be a few minutes behind the script.

- If the script is already running in the background, it will not be run from the browser, even with this selected.

Enable:

Show Most Recent Entry in Table Format

Disable:

Maximum Number of Data Entries to Display

-Note: It is recommended that the max not be set over 100 if you have Automatic Reload set

Data File Table Output

-By disabling a table, data from that table will not be output to the browser, but it will still be stored in the data file.

SSS Queue Sizes

Disable:

SDSRV Acquires Queued for EcSbSubServer

Disable:

Total Acquires by State in SDSRV - Notifier States

Disable:

Rate of Granule Processing in SDSRV

Disable:

Requests by State in DDIST

Disable:

Requests by State in INGEST

Disable:

DPRs by State in PDPS

Disable:

Subscribed Production Jobs Queued in PDPS

Disable:

States of Entries in Order Manager by Request Total

Disable:

OM Intervention Total

Disable:

Total Granules per Type in Order Manager

Disable:

Done [5 mins] per Type and Status in Order Manager

Disable:

Status of Datapool Action Queue - SSS Inserts

Disable:

Status of Datapool Action Queue - OMS Inserts

Disable:

Figure 4.12.19-12. Table-format Monitoring Options Page

Table 4.12.19-2. Graph-format Monitoring Options

Field Name	Data Type	Size	Entry	Description
Enable Automatic Reload	checkbox	n/a	Optional	Keeps the table display updated with the most recent information collected about the system
Automatic Reload Interval	Int	120	Optional	The frequency of the automatic reload function
Run Vital Stats script via the browser	checkbox	4	Optional	If the Vital Stats script is not currently running, the user can select this option to run the script in sync with the reloading of the graphs. This ensures that the graphs contain the most up-to-date information possible.
Show Most Recent Entry in Table Format	checkbox	n/a	Optional	If this is disabled, the user will only see the output of the Vital Stats script as it is found in the data file.
Maximum Number of Data Entries to Display	int	100	Optional	If the browser is set to reload, it may be advisable to limit the number of entries from the data file to be displayed.
Data File Table Output	checkboxes	n/a	Optional	Allows the user to disable any table he would not like to monitor. Any selected table will not be displayed during Table-Format Monitoring

4.12.19.11 Data-set Specific Monitoring Options

Each group of data (Spatial Subscription Server, Science Data Server, Data Distribution Server, Ingest Subsystem, Production and Planning Subsystem, Order Management Subsystem, Data Pool Subsystem) has configuration options that can be set specifically for that group of data. Within these groups, options are split out for the graph or table in that group and even for specific types of data that may appear in a graph or table.

Spatial Subscription Server Table Sets:

- **SSS Queue Sizes**

- Contains the Spatial Subscription Server queue sizes. The SSS Event Queue reports on the notifications SSS has yet to work off. The SSS Action Queue reports on notifications that have been worked off and match an existing subscription. The SSS Event Count reports the number of new events in the last hour.

Color Thresholds

- If an element of a graph passes within these set values, lines will be drawn across the graph to show the proper bounds in the same color as the guilty line.
- Yellow will be a dotted line, red will be a dashed line. Overlaps will be red.
- Set to 'x' for infinity, leave empty to disable.

SSS Queue Sizes

SSS Action Queue

Yellow - Red -

SSS Event Count

Yellow - Red -

SSS Event Queue

Yellow - Red -

Viewing Options

- These options will either disable a table element or divide the elements into separate graphs for easier viewing. Any elements without a graph selected will be put onto the first graph.

SSS Queue Sizes

SSS Action Queue

Disable Set 1 Set 2 Set 3

SSS Event Count

Disable Set 1 Set 2 Set 3

SSS Event Queue

Disable Set 1 Set 2 Set 3

Y-axis Maximum Values for Graphical Output

- If an element of the table goes beyond these values, it will be modified to equal the top bound

SSS Queue Sizes

Set 1 Set 2 Set 3

E-mail Notification

- If an element passes into the specified range, an e-mail will be sent. Another e-mail will only be sent if that element passes out of an d then back into the range.

SSS Queue Sizes

Yellow: Red:

To:

Set Options

Figure 4.12.19-13. Dataset-Specific Monitoring Options Page

Table 4.12.19-3. Dataset-Specific Monitoring Options

Field Name	Data Type	Size	Entry	Description
Color Thresholds	int		Optional	If an element of a table passes within these set values, the operator will be notified both visually and by e-mail notification. If viewing in Line-graph format, dashed lines will be drawn across the graph in the same color as the offending element over the bounds for the color threshold. If viewing in Table format, the guilty elements will be highlighted in either yellow or red.
Viewing Options	radio	n/a	Optional	Here the user can divide table elements into as many as three different sets or disable an element altogether. A different graph will be drawn for each set of data in Graph-format monitoring. In Table-format monitoring, the elements will be separated into different tables for each set.
Y-axis Maximum Values for Graphical Output	int		Optional	If an element of the table goes beyond these values, it will be modified to equal the top bound
E-mail Notification: Yellow	checkbox	n/a	Optional	If an element passes into the specified range, an e-mail will be sent. Another e-mail will only be sent if that element passes out of and then back into the range. Selecting Yellow will send a notification if something passes in a yellow threshold
E-mail Notification: Red	checkbox	n/a	Optional	Selecting red will send a notification if something passes in a red threshold
E-mail Notification: To	String	100	Optional	A list of e-mail addresses may be placed here to which notifications will be sent.

4.12.19.12 General GUI Options

To facilitate ease of use with the GUI, this page allows some default options to be set regarding the e-mail notifications. It also allows the user to set what font-size he would like to use throughout the GUI to accommodate the different monitors and Internet Browsers that may be used.

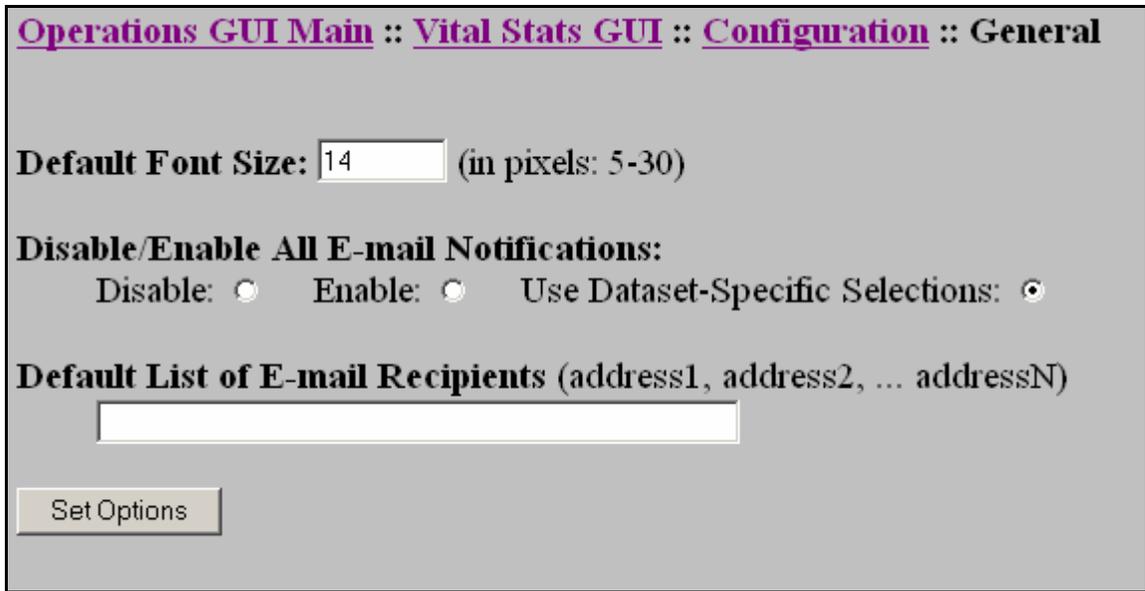


Figure 4.12.19-14. General GUI Options Page

Table 4.12.19-4. General GUI Options

Field Name	Data Type	Size	Entry	Description
Default Font Size	int	14	Optional	All pages will be adjusted to display text in this set font size
Disable/Enable All E-mail Notifications	Checkbox	n/a	Optional	Checking this prevents any notifications from being sent
Default List of E-mail Recipients Values for Graphical Output	String		Optional	These addresses will be used whenever none are provided under the Dataset-specific pages

4.12.19.13 Path/Address Options

All paths must be supplied for the GUI to operate properly. On the first run of the GUI the user will be brought to a page where he is asked to supply them.

Operations GUI Main :: Vital Stats GUI :: Configuration :: General

Mode (default: OPS)

Set Paths According to Mode

- This does not include web addresses. These must be set manually according to how your server was set up

Disable:

Path of the VitalStats Data File

-If the path you supply ends in a "/", the GUI will locate today's output in the supplied directory. Otherwise it will assume you are supplying the path to a specific data file. The data files will be stored in /usr/ecs/\$MODE/CUSTOM/data/MSS.

Path of the VitalStats script

-The VitalStats script can be found at /usr/ecs/\$MODE/CUSTOM/utilities/EcMsOpVitalStats.pl

Path of the images directory for storing graphs:

- This should be /usr/ecs/\$MODE/CUSTOM/WWW/MSS/docs/images. If you change the directory, make sure to modify your server to point to the new directory.

Path of the cgi-bin directory:

-The cgi-bin directory can be found at /usr/ecs/\$MODE/CUSTOM/WWW/MSS/cgi-bin/EcMsOpGui

-Note: Configurations files MUST be saved in a 'cfg' subdirectory of this directory

Web address of the cgi-bin directory:

Web address of the images directory:

- An docs alias will have to be set up on your server pointing to the images directory.

Figure 4.12.19-15. Vital Stats Path Options

Table 4.12.19-5. Vital Stats Path Options Fields

Field Name	Data Type	Size	Entry	Description
Mode	String		Required	
Set Paths According to Mode	Checkbox	n/a	Optional	This sets all the paths according to the mode-based default paths
Path of the VitalStats Data File	String		Optional	If not supplied, this will be the most recent data file. Otherwise it can be changed to an older file if the user wants to analyze previously collected data. File format is: EcMsOpVitalStats_[MODE].dat_[Month][dd]
Path of the images directory for storing graphs	String	n/a	Optional	A directory is required where png graph images can be accessed and stored.
Path of the cgi-bin directory	String	n/a	Optional	This field is used most often in testing so that an alternate cgi-bin directory from the one in the mode may be used thereby allowing different versions of the GUI to be tested.
Web address of the cgi-bin directory	String	n/a	Required	http://[XX]ins02.[location].gov:[port number]/cgi-bin/
Web address of the images directory	String		Required	http://[XX]ins02.[location].gov:[port number]/images/

4.12.19.14 Save/Load Current Monitoring Configuration Parameters

At the bottom of the Vital Stats GUI Main Configuration Options Page there is an option for saving or loading configuration parameters. From here the user may enter the name he wishes to save the current configuration as and click "Save". He can then later load all his monitoring options (all options except path information) by reentering the name and clicking "Load".

Save/Load Current Monitoring Configuration Parameters

(Stored in '/home/cmshared/Wz/cgi-bin/MSS/Op/cfg/')

Figure 4.12.19-16. Vital Stats GUI Save/Load Option

4.12.19.15 Viewing GUI Documentation

Click on the "Documentation" link from the Vital Stats GUI Main Page. This page is the basic instructions for how to use the GUI and includes a section on interpreting the data.

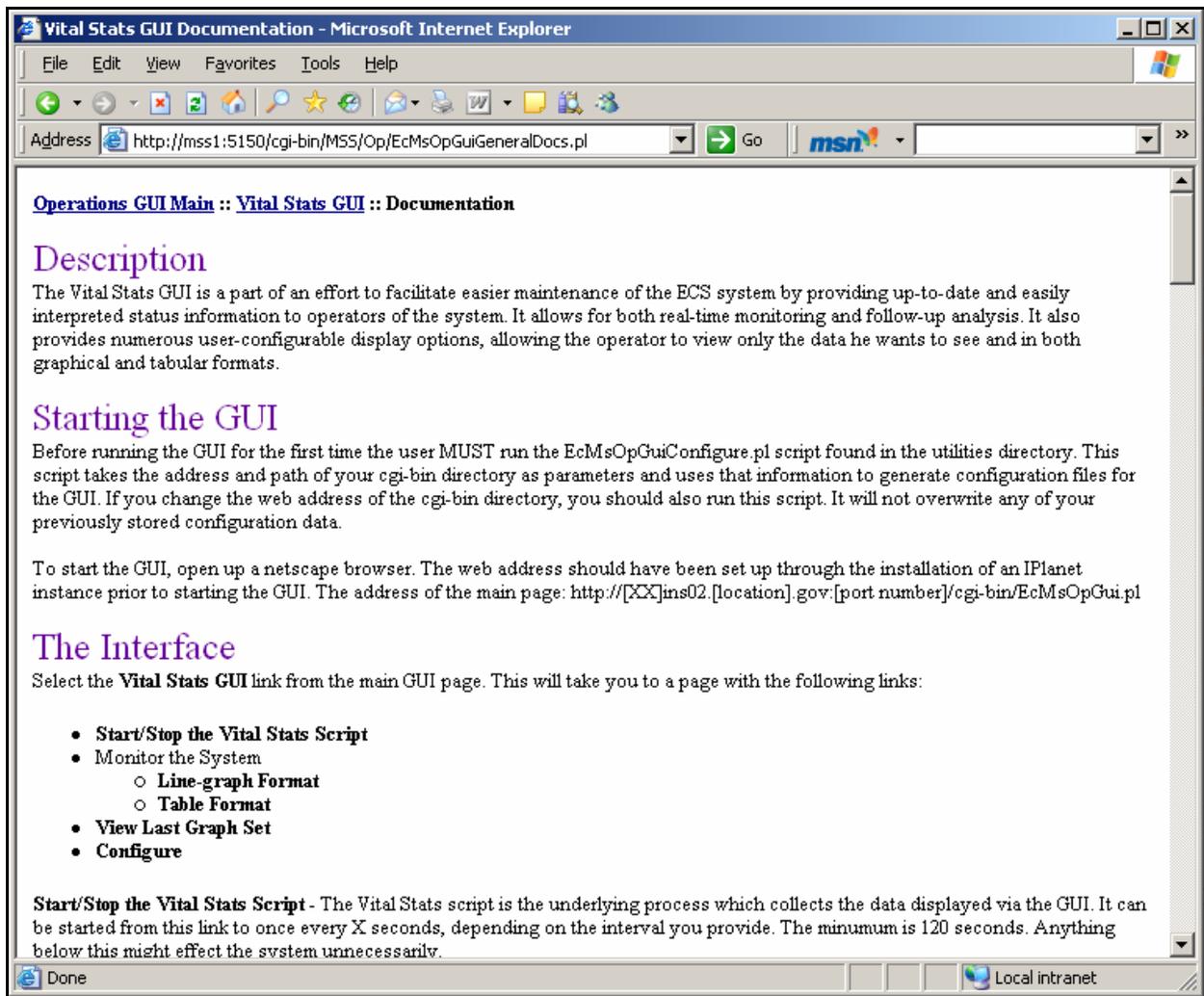


Figure 4.12.19-17. Vital Stats GUI Documentation Page

4.12.19.16 The Action Thread Runner

To access the Vital Stats GUI, click on the "Action Thread Runner" link. This redirects the user to the Action Thread Runner Main Page. On the first load, the user will be redirected to the Path/Address Options page. (See Figure 4.12.19-17)

Please Verify Directory Information

Mode: (default: OPS)

Path of directory to store temporary data files:
 - Default is /usr/ecs/\$MODE/CUSTOM/WWW/MSS/cgi-bin/EcMsOpGui/temp/

Path of the cgi-bin directory:
 -Note: Configurations files MUST be saved in a 'cfg' subdirectory of this directory

Web address of the cgi-bin directory:

Default Font Size:
 - In pixels: 5-20
 - Not supported by netscape4.78

Figure 4.12.19-18. Path/Address Options Page that Appears On First Load of the Action Thread Runner

Operations GUI Main :: Action Threads

- [Run All Action Threads](#)
- Action Threads
 - [Add New Action Thread](#)
 - [View/Edit Action Threads](#)
- Failure Actions
 - [Add New Failure Action](#)
 - [View/Edit Failure Actions](#)
- Built-In Actions
 - [Configure Built-In Actions](#)
 - [Built-In Action Documentation](#)
- [Options](#)
- [Documentation](#)

Figure 4.12.19-19. Action Thread Runner Main Page

4.12.19.17 Adding New Action Threads

The user can set up new actions by clicking on the Add New Action Thread link from the main Action Thread page.

Operations GUI Main :: Action Threads :: Add New Action Thread

Action Name:

Action:
- Either enter the path ([path]/[script name] [param1 ... paramN]) or select an action from the Built-In action list. Built-in actions have other configuration options which can be set up from the "Configure Built-in Actions" link from the main Action Thread Runner page.
 [Select Built-In Action] ▾

Failure action: ([path]/[script name] [param1 ... paramN])
- If the script is selected from the list, instead of entered manually, it's failure actions will apply. It will be run until it is successful or until the set number of failures is reached.
 [Select Existing Action] ▾

Exit Status range considered failure:
- If no minimum, maximum, or output string is set, a failure will be considered any exit status from 1 to 255
- If no max is set, an equivalence to the min will be considered a failure
 -

Output string considered a failure
- If this string is found in the output, the action will be considered to have failed

Number of permissible failures:

E-mail list for notifications of failures: ([email1 ... emailN])

Polling interval: (in seconds)

Run Periods (Optional)
- You can enter a list here of times of day you would like this script to start and/or stop running, and also days of the week on which to run.
Start Times: (HH:MM ... HH:MM)

Stop Times: (HH:MM ... HH:MM)

Days on which to run: ([M][Tu][W][Th][F][Sa][Su])

Append Output
- Selecting this option will cause output to be collected on each run of an action, so that when you click the "View Output" button, all output collected will appear, rather than just for that particular run.

Figure 4.12.19-20. Add New Action Thread Page

Table 4.12.19-6. Add New Action Thread Fields

Field Name	Data Type	Size	Entry	Description
Action Name	String		Required	The unique identifier for the action
Action Path	String		Required	This field will either require the path to an executable (plus parameters) or the selection of a Built-In action
Failure Action	String		Optional	This field will either require the path to an executable (plus parameters) or the selection of a user-defined failure action. Failure actions are called whenever an action returns with a failed status. Failure actions allow the user to have the GUI automatically act when an action reports that something has gone wrong in the system
Exit Status range considered a failure	Int		Optional	If the executable finishes with an exit status within this range, it will return a failed signal
Output string considered a failure	String		Optional	If this string is found in the output, the action will return a failed signal
Number of permissible failures	Int		Optional	The script will be stopped entirely after it has failed this number of times
E-mail list for notifications of failures	String		Optional	An e-mail will be sent to all the addresses in this list when a script returns a failed status
Polling interval	Int		Optional	Seconds in between executions of the action
Run Periods – Start Times	String (HH:MM ... HH:MM)		Optional	Allows the user to enter a list of time of day he would like the script to start and/or stop running, and also days of the week on which to run.
Run Periods – Stop Times	String (HH:MM ... HH:MM)		Optional	Allows the user to enter a list of time of day he would like the script to stop running
Run Periods - Days	String ([M][Tu][W][Th][F][Sa][Su])		Optional	Allows the user to enter a list of days of the week on which to run
Append Output	Checkbox		Optional	Selecting this option will cause output to be collected on each run of an action, so that when you click the "View Output" button, all output collected will appear, rather than just for that particular run.

4.12.19.18 Viewing/Editing Action Threads

A list of Actions Threads set up the user can be viewed by clicking on the View/Edit Action Threads link from the main Action Thread page. From this page the user can edit an Action Thread's options by clicking on the "Action Name". The user can also edit an Action Thread's Failure Action by clicking on the "Failure Action" name.

The user can delete, enable, or disable any existing Action Thread by clicking on the corresponding link ("Disable", "Delete", or "Enable") to the left of the Action. After disabling an Action Thread the Action Thread's options will appear in gray. A disabled action can be edited but will not be run when the Action Thread Runner is run.

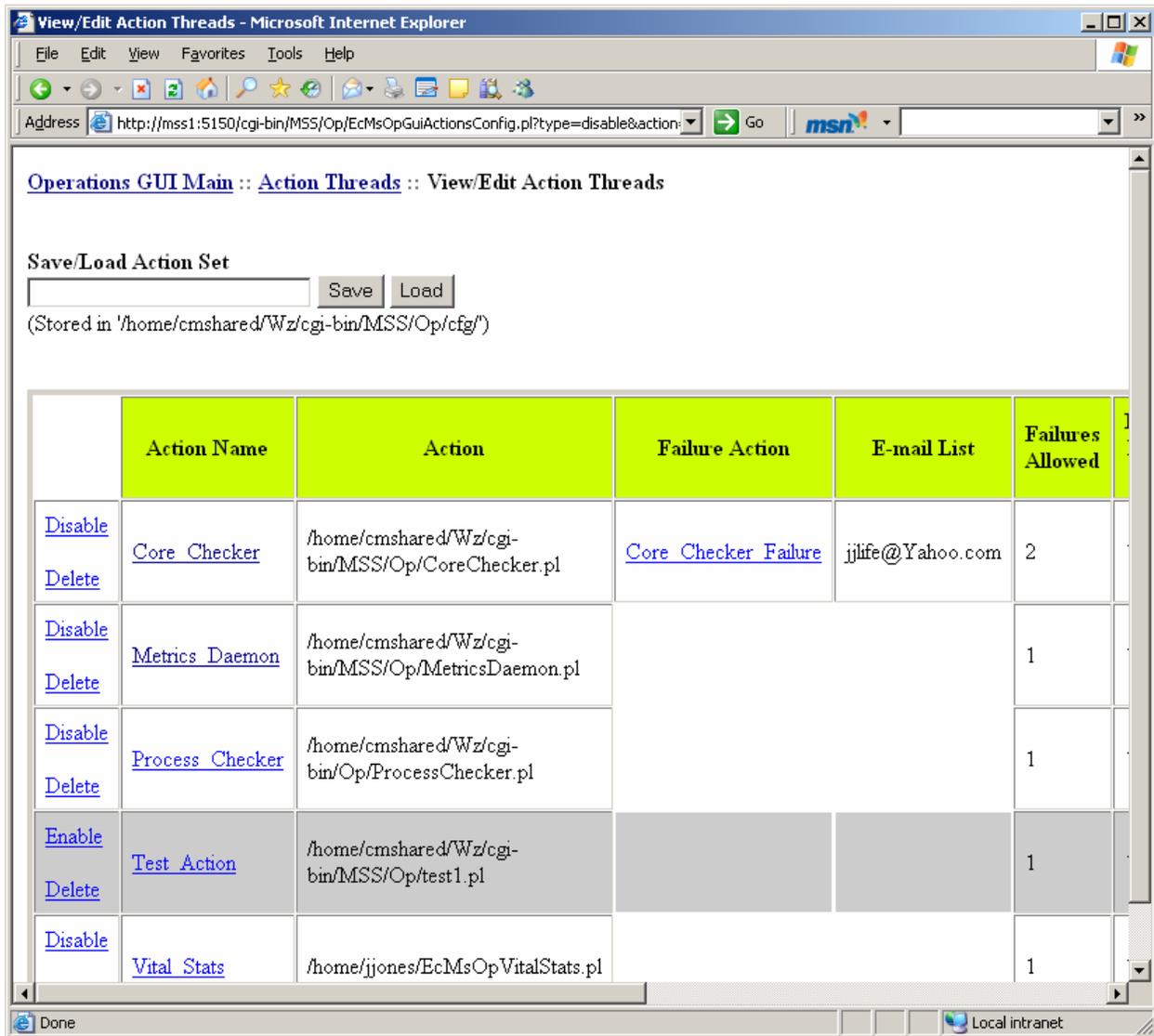


Figure 4.12.19-21. View/Edit Action Threads Page

Table 4.12.19-7. View/Edit Action Threads Fields

Field Name	Data Type	Size	Entry	Description
Save/Load Action Set	String		Optional	By filling in this field, the user may save or load an action set. This will copy the current configuration file to the specified location, or overwrite the current configuration file with the one provided.

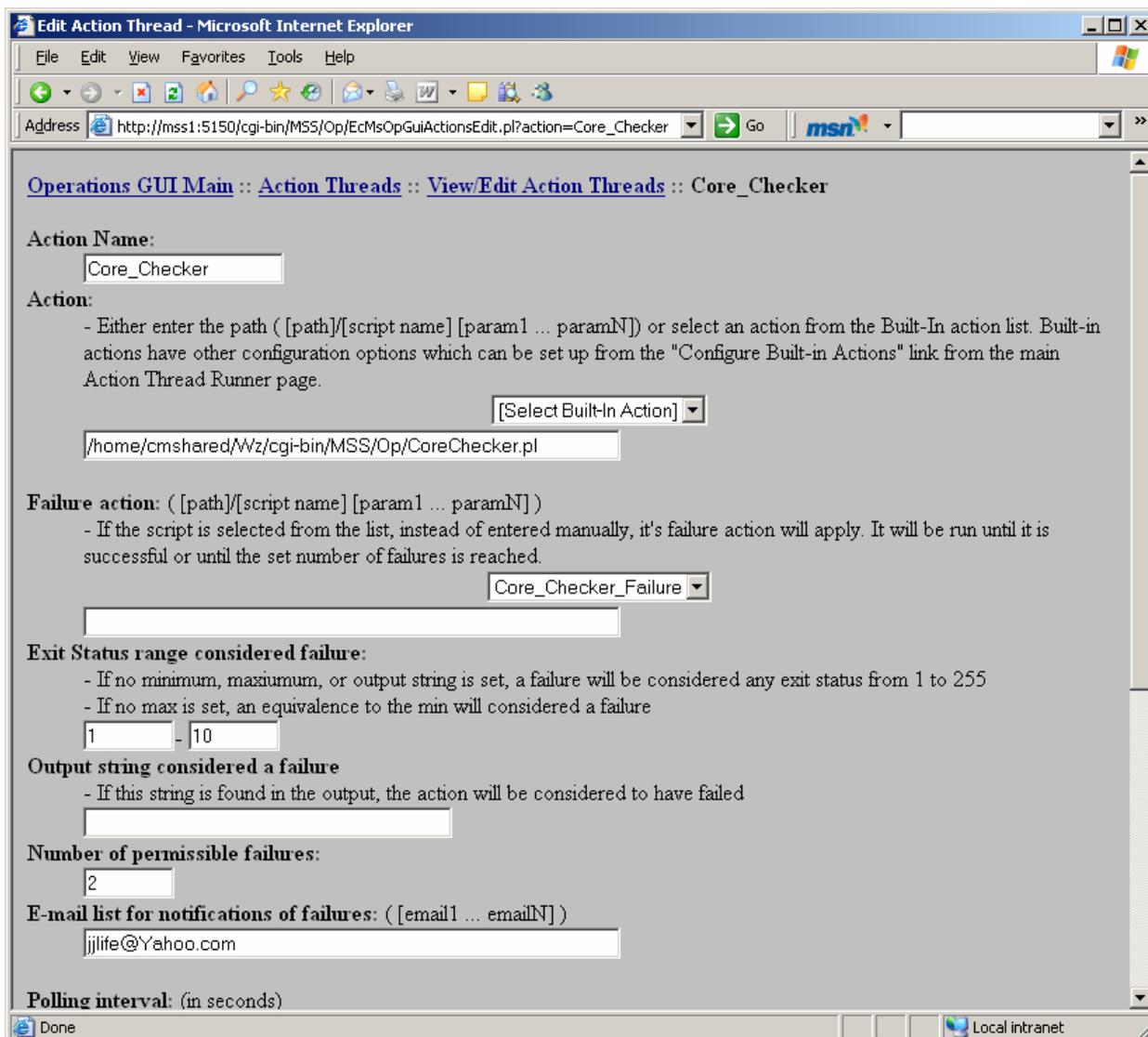


Figure 4.12.19-22. Editing an Existing Action

4.12.19.19 Built-in Failure Actions

If Landover wishes to deliver any actions which require extra configuration, they will be listed as Built-In Actions. To configure these actions, click on the "Configure Built-In Actions" link from the main Thread Runner page. These will not be listed on the "Add New Action Thread" page until they have been properly configured.

4.12.19.20 Adding New Failure Actions

The user can define failure actions for easier attachment to action threads by creating new failure actions. To add a new failure action click on the "Add New Failure Action" from the main Thread Runner page.

Operations GUI Main :: Action Threads :: Add New Failure Action

Failure Action Name:

Action: ([path]/[script name] [param1 ... paramN])

Failure action: ([path]/[script name] [param1 ... paramN])
- This script will run once after the parent failure action has failed

E-mail list for notifications of failures: ([email1 ... emailN])

Exit Status range considered failure:
- If no minimum, maximum, or output string is set, a failure will be considered any exit status from 1 to 255
- If no max is set, an equivalence to the min will be considered a failure
 -

Output string considered a failure
- If this string is found in the output, the action will be considered to have failed

Polling interval: (in seconds)

Number of permissible failures:

Figure 4.12.19-23. Add New Failure Action Page

Table 4.12.19-8. Add New Failure Action Options

Field Name	Data Type	Size	Entry	Description
Failure Action Name	String		Required	The unique identifier for the failure action
Path	String		Required	This field will either require the path to an executable (plus parameters)
Failure Action	String		Optional	Failure actions are called whenever a user-defined failure action returns with a failed status. Failure actions allow the user to have the GUI automatically act when a user-defined failure action reports that something has gone wrong in the system. No user-defined failure actions are allowed for this field to prevent infinite loops
E-mail list for notification of failures	String		Optional	An e-mail will be sent to all the addresses in this list when a script returns a failed status
Exit Status range considered a failure	Int		Optional	If the executable finishes with an exit status within this range, it will return a failed signal
Output string considered a failure	String		Optional	If this string is found in the output, the action will return a failed signal
Polling interval	Int		Optional	Seconds in between executions of the action. Failure actions are run only once if they immediately return with a successful status.
Number of permissible failures	Int		Optional	The script will be stopped entirely after it has failed this number of times

4.12.19.21 Viewing/Editing Failure Actions

A list of Failure Actions set up the user can be viewed by clicking on the View/Edit Failure Action Threads link from the main Action Thread page. From this page the user can edit a Failure Action's options by clicking on the "Failure Action Name".

The user can delete the Failure Action by clicking on the "Delete" button to the left of the Action. If a Failure Action is deleted it will be removed from all Action Threads using it as a Failure Action. The user will be informed which Action Threads are using the Failure Action and will be asked to confirm his decision to delete it.

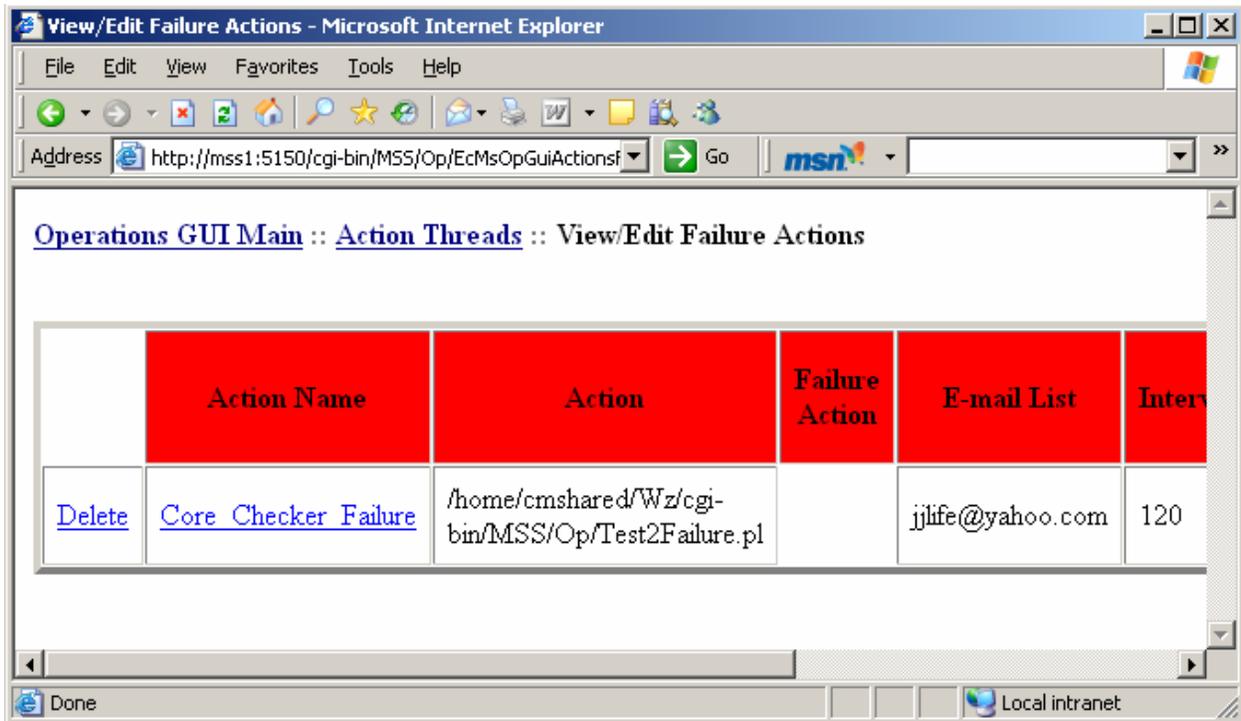


Figure 4.12.19-24. View/Edit Failure Actions Page



Figure 4.12.19-25. Prompt Appearing on Deletion of a Failure Action In Use

4.12.19.22 Action Thread Runner Options

Operations GUI Main :: Action Threads :: Options

Mode: (default: OPS)

Path of directory to store temporary data files:
- Default is /usr/ecs/\$MODE/CUSTOM/WWW/MSS/cgi-bin/EcMsOpGui/temp/

Path of the cgi-bin directory:
-Note: Configurations files MUST be saved in a 'cfg' subdirectory of this directory

Web address of the cgi-bin directory:

Default Font Size:
- In pixels: 5-30
- Not supported by netscape4.78

Figure 4.12.19-26. Action Thread Runner Option Page

Table 4.12.19-9. Action Thread Runner Path Options Fields

Field Name	Data Type	Size	Entry	Description
Mode	String		Optional	If an element of a table passes within these set values, the operator will be notified both visually and by e-mail notification. If viewing in Line-graph format, dashed lines will be drawn across the graph in the same color as the offending element over the bounds for the color threshold. If viewing in Table format, the guilty elements will be highlighted in either yellow or red.
Path of the directory to store temporary data files	Checkbox	n/a	Optional	This directory is used to temporarily store files used for providing output from actions that have completed
Path of the cgi-bin directory	String	n/a	Optional	This field is used most often in testing so that an alternate cgi-bin directory from the one in the mode may be used thereby allowing different versions of the GUI to be tested.
Web address of the cgi-bin directory	String	n/a	Required	http://[XX]ins02.[location].gov:[port number]/cgi-bin/
Default Font Size	int	14	Optional	All pages will be adjusted to display text in this set font size

4.12.19.23 Running Action Threads

After an action has been added, the Action Thread Runner can be run by clicking on the "Run All Action Threads" link from the main Action Thread page. This will direct you to a page with two frames:

The Lower Frame provides status information to the user, reporting when an Action Thread or Failure Action is run, whether or not an Action Thread or Failure Action completed successfully, and if any Action Threads complete after their specified Polling Interval.

The Upper Frame allows the user to view Action Thread specifications and to enable or disable any existing Action Threads. A disabled action thread will stop running until it is enabled again. Disabling and enabling an action that has already failed will cause the action to start running again (if it hasn't completed from the last time it will not start again until it has completed AND its failure status has been analyzed). If all Action Threads have terminated, enabling an action will not do anything until the browser is refreshed.

When this is run, the GUI will initiate all enabled actions by running the "Action Path" from the command line as a background process. It will inform the user whenever it runs an action, printing the time and the "Action Name".

After each action completes, the GUI will analyze the exit status and output for a failure. If an action has failed, its "Failure Action" will be called and an e-mail will be sent out to all the e-mails on the "E-mail list for notifications of failures".

After the "Polling interval" has elapsed (it is measured from the time the action was initiated), the action will be run again unless it has reached, in sequence, its "Number of permissible failures". A warning will be printed if the action took longer than the specified interval to complete.

After all Action Threads have failed, or if there are no Action Threads or all actions are disabled, the browser will delete all data files used to store output and exit status information. The Action Thread Runner can be rerun by clicking on the "Run All Action Threads" link in the Upper Frame.

The screenshot shows a web interface titled "Operations GUI Main :: Action Threads :: Run All Action Threads". At the top, there are two buttons: "Kill Thread Runner" and "Pause Thread Runner". Below these is a table with the following columns: Action Name, Action, Failure Action, E-mail List, and Failures Allowed.

	Action Name	Action	Failure Action	E-mail List	Failures Allowed
Core_Checker	/home/cmshared/Wz/cgi-bin/MSS/Op/CoreChecker.pl	Core_Checker_Failure	jjlife@Yahoo.com	2	1

Below the table is a log of system events:

```

15:30:6: Core Checker is Stopped. It will restart at 16:00.
15:30:6: Metrics Daemon is Stopped. It will restart at 09:00 on Tuesday.
15:30:6: Process Checker does not run today. It will restart at 00:00 on Friday.
15:30:6: Running Vital Stats
15:30:12: Vital Stats Unsuccessful (returned 1) View Output
15:30:12: Running Vital Stats Failure (Failure Action for Vital Stats)
15:30:13: Failure (Failure Action for Vital Stats) Successful (returned: 0) View Output
15:40:6: Running Vital Stats
15:50:12: Vital Stats Successful (returned: 0) View Output
15:50:6: Running Vital Stats
15:50:12: Vital Stats Successful (returned: 0) View Output
16:00:0: Running Core Checker
16:00:6: Running Vital Stats
  
```

Figure 4.12.19-27. Sample Run of the Action Thread Runner

4.12.19.24 Pausing Action Threads

At the top of the upper frame of the "Run All Action Threads" page there are two buttons: "Kill Thread Runner" and "Pause Thread Runner". Click on the "Pause Thread Runner" and a prompt

will appear in the lower frame informing the user that the Action Thread Runner has been paused.

Threads that have been initiated already will continue to run, though no new threads will be started while the thread runner is paused. The Thread Runner will continue to monitor when new actions should be run based upon the polling intervals that are set. Once the user clicks on "Restart Thread Runner", the Thread Runner will rerun all of the threads where the polling interval has elapsed. Warnings will be displayed, however, if a thread misses its regular polling interval. The Thread Runner will continue running thereafter as if nothing had changed.

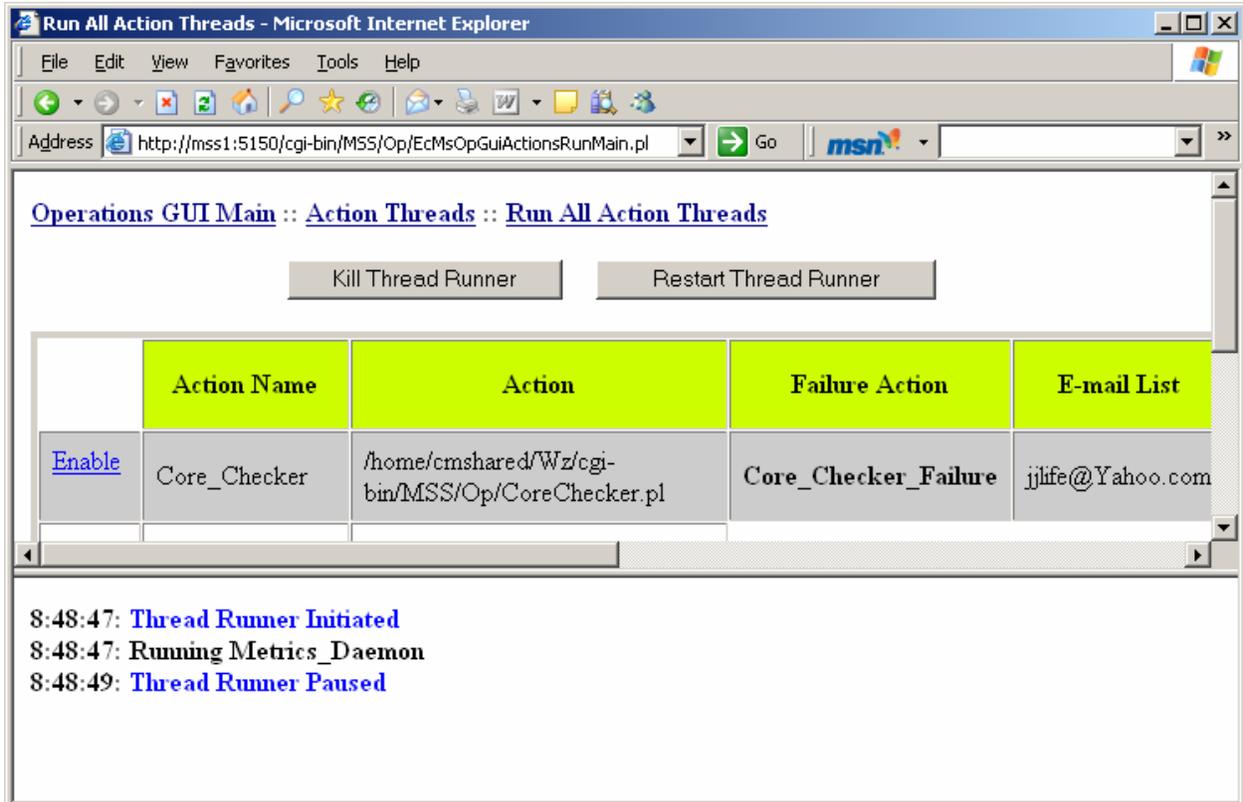


Figure 4.12.19-28. The Action Thread Runner After a Pause

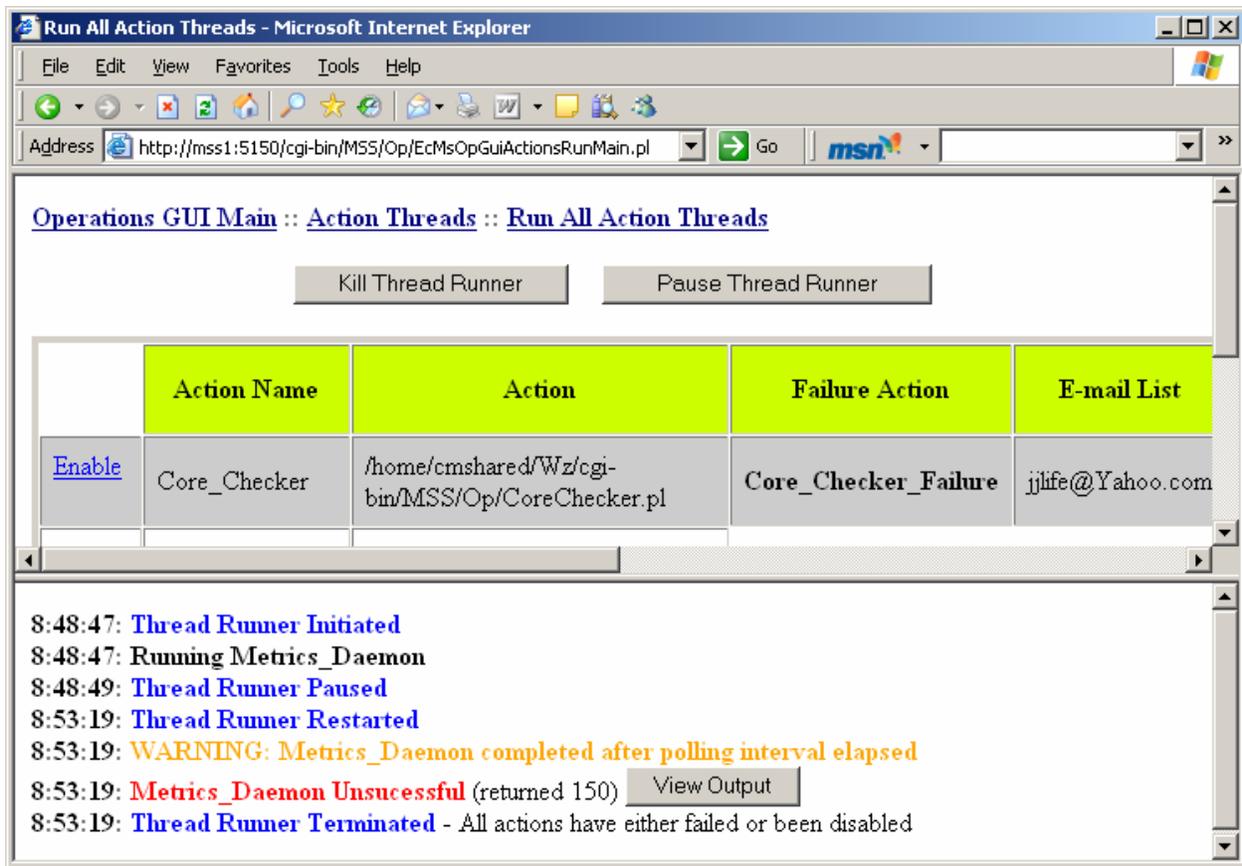


Figure 4.12.19-29. The Action Thread Runner after a Restart

4.12.19.25 Killing Action Threads

At the top of the upper frame of the "Run All Action Threads" page there are two buttons: "Kill Thread Runner" and "Pause Thread Runner". Click on the "Kill Thread Runner" and a prompt will appear in the lower frame informing the user that the Action Thread Runner has been killed.

At this point the program will determine if any threads are still running, even though the Thread Runner has terminated. The user will be given a prompt of any threads that resemble the actions that have been running and will be allowed to select which threads he would like to kill. The Thread Runner will inform the user which processes were terminated and which processes it was unable to terminate.

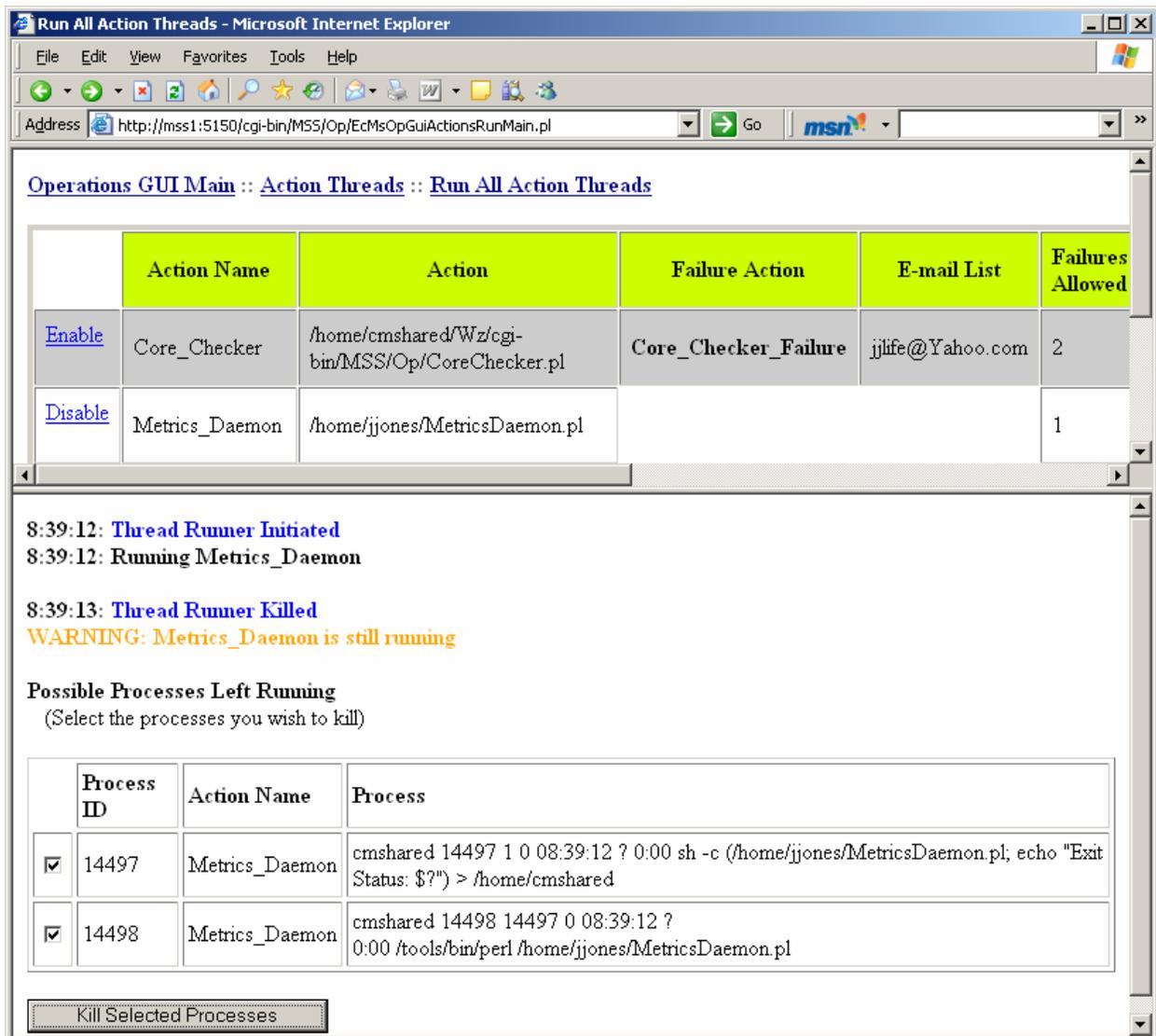


Figure 4.12.19-30. The Action Thread Runner After a Kill

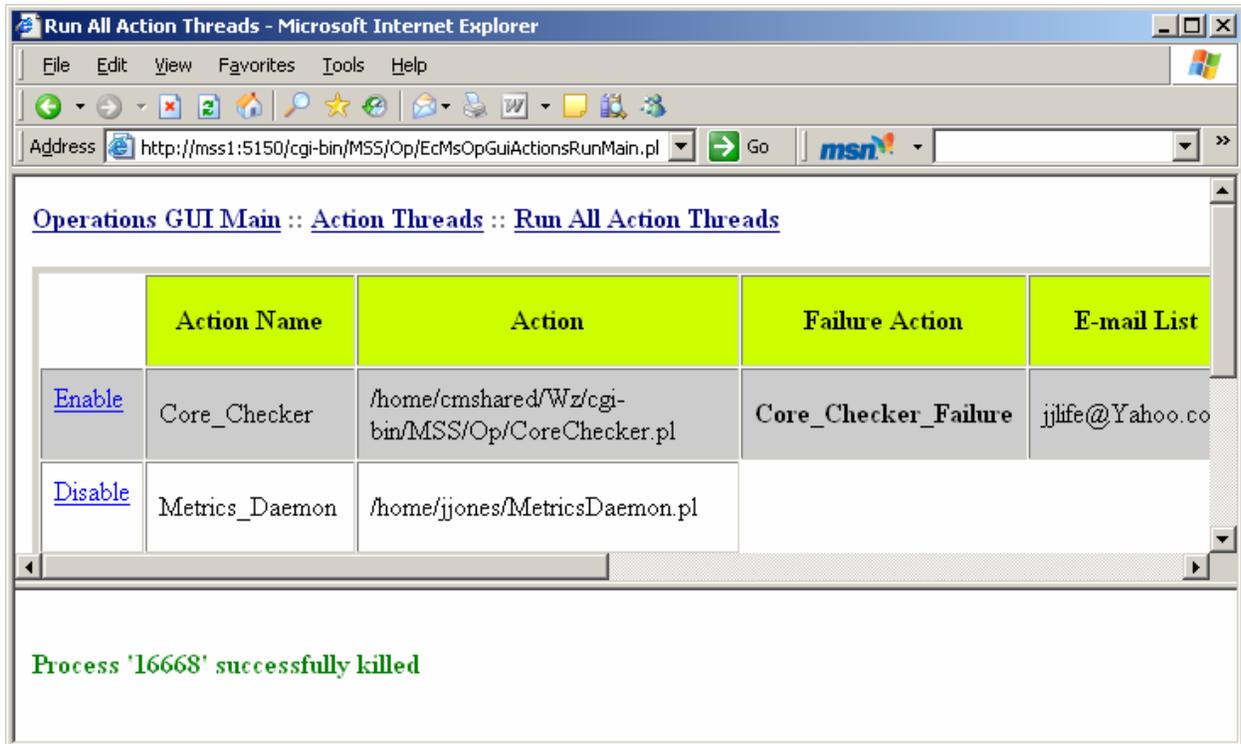


Figure 4.12.19-31. The Action Thread Runner after Successfully Terminating a Process

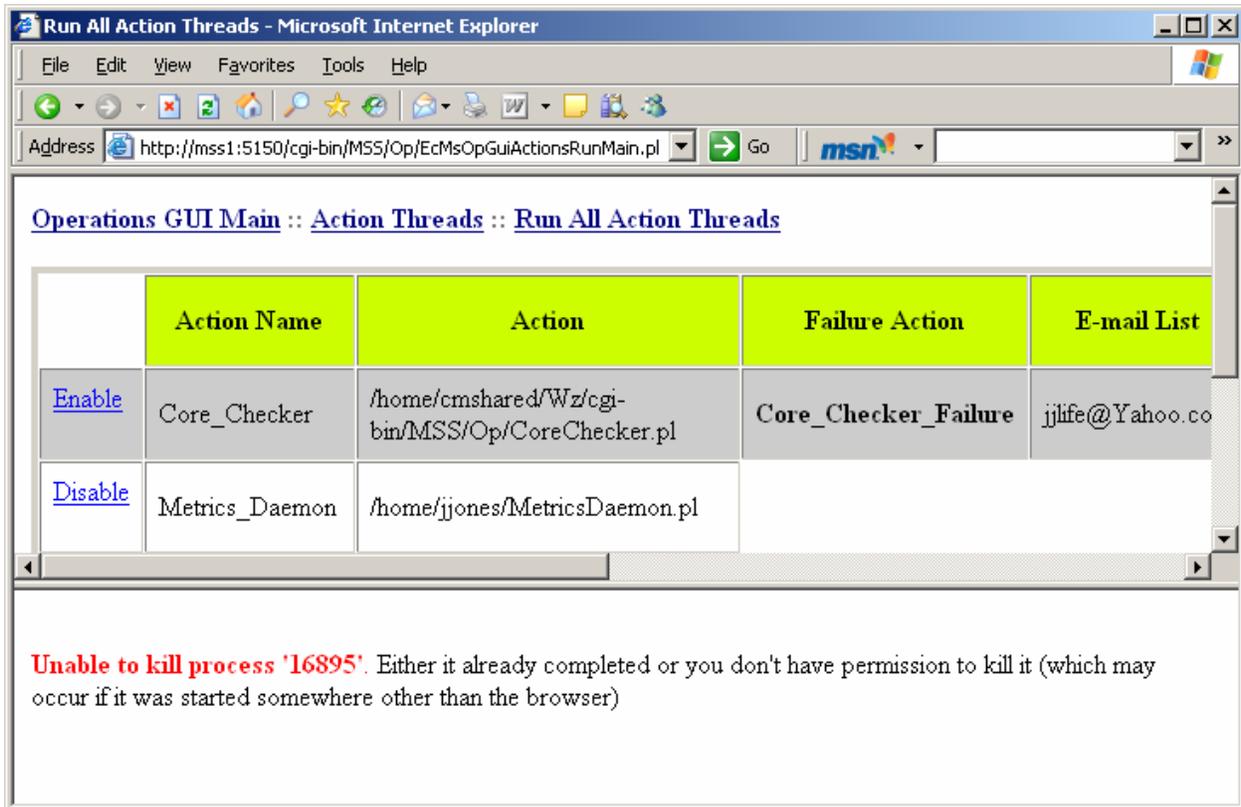


Figure 4.12.19-32. The Action Thread Runner after Unsuccessfully Terminating a Process

4.12.19.26 Viewing Thread Output

The user may see the output from any completed run of an action by clicking on a "View Output" button next to the results of an action's run. If the Thread Runner identifies the output as html, the output will be displayed with all the formatting of an html page, otherwise the output will be plain text.

Metrics Daemon Output - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Metrics Daemon - EDC (Gigabytes)

OPS, 05/20/2004 12:31:00

	00:31	13:31	14:31	15:31	16:31	16:32	17:31	18:31	19:31	20:31	21:31	22:31	23:31
PDS	0	0	0	0	0	0	0	0	0	0	0	0	0
DPL Inserts	1	0	0	0	0	0	0	1	1	1	1	1	1
DPL OMS Inserts	0	0	0	0	0	0	0	0	0	0	0	0	0
Modis Substitutions	0	0	0	0	0	0	0	0	0	0	0	0	0
Aster GDS	0	0	0	0	0	0	0	0	0	0	0	0	0
FtpPull Requests	0	0	0	0	0	0	0	0	0	0	0	0	0
sips	16	1	2	4	5	0	7	9	11	14	16	16	16
On-Demand Distribution	0	0	0	0	0	0	0	0	0	0	0	0	0
PDPS Distribution	6	0	0	0	0		0	0	0	6	6	6	6

Internet

Figure 4.12.19-33. Sample HTML Output from an Action

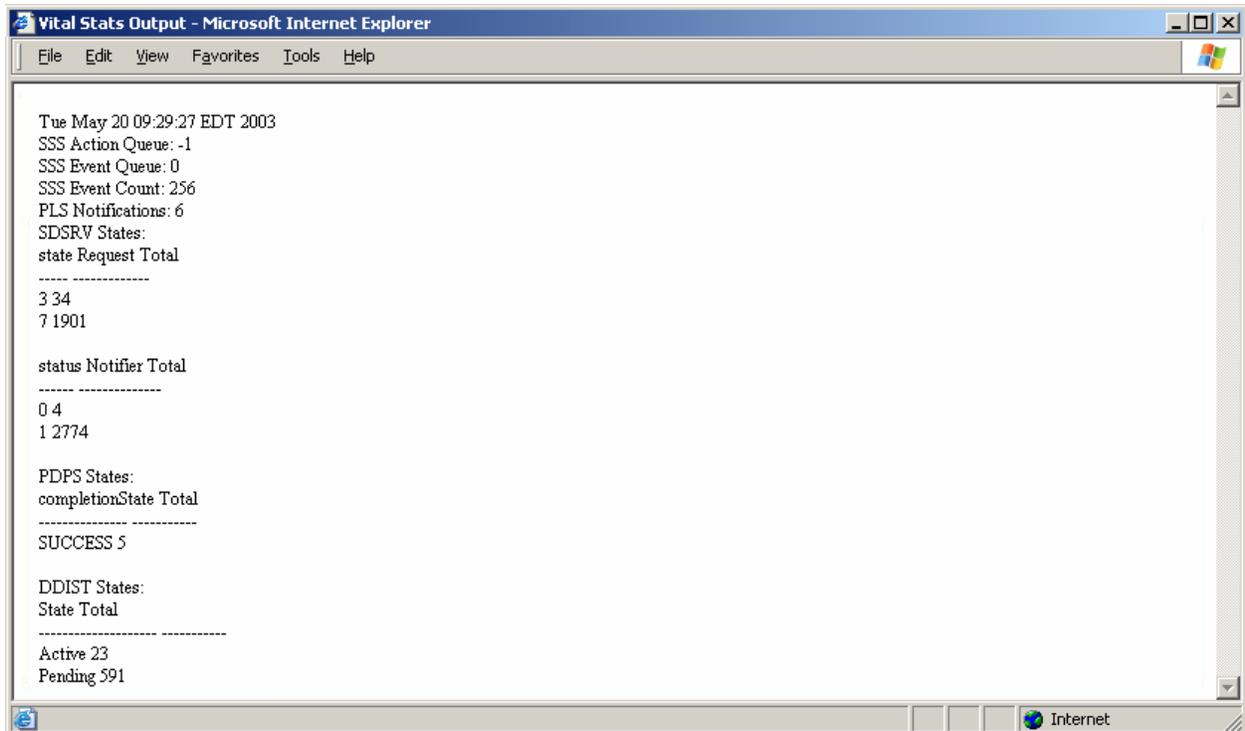


Figure 4.12.19-34. Sample Text Output from an Action

4.12.19.27 Viewing Action Thread Runner Documentation

Click on the "Documentation" link from the Action Thread Runner Main Page. This page is the basic instructions for how to use the Action Thread Runner.

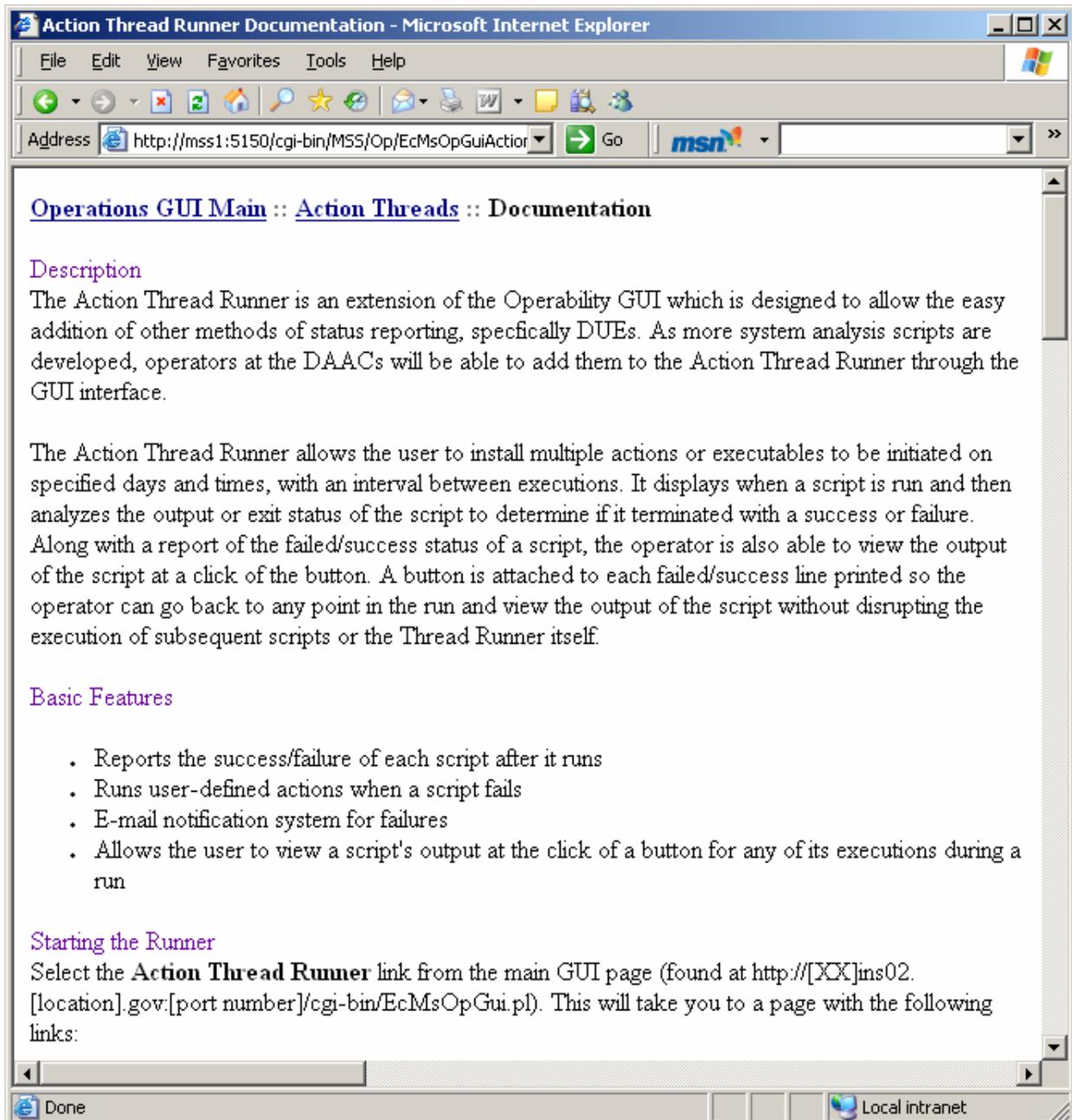


Figure 4.12.19-35. Action Thread Runner Documentation

4.12.19.28 Operability GUI Main Screen

See Section 4.12.19.1.

4.12.19.29 Required Operating Environment

The Operability GUI runs on a Linux platform.

4.12.19.30 Databases

The Operability GUI accesses the Spatial Subscription Server, Production and Planning Subsystem, Storage Management, Ingest, OrderManager, Data Pool, and Science Data Server databases.

4.12.19.31 Interfaces and Data Types

The Operability GUI pulls data from Sybase and writes image and configuration files to ECS directories using Perl CGI.

4.12.19.32 Special Constraints

There are no special constraints to running the Operability GUI.

4.12.19.33 Outputs

Please see Section 4.12.19.4.1.

4.12.19.34 Event and Error Messages

The Operability GUI writes status and error messages directly to the browser as an error page.

4.12.19.35 Reports

The Operability GUI does not generate reports.

Appendix A. User Interface Messages

A.1 Overview

In this section, all messages appearing on the Graphical User Interface (GUI) of ECS custom applications are presented in separate tables. (For information on commercial applications used in ECS, see the user's manuals of the individual applications.) The tables are organized according to the ECS subsystem to which the applications belong. Each table has the following columns:

- **Message Text.** Messages can refer to user actions or provide information about what is happening in the application or in the system. There can be error, application state changes, informational and debugging, transactional, and security messages. In the following tables, messages are presented exactly as they appear on the current user interface
- **Impact.** In the following tables, a brief description is presented of what could occur as a consequence of the information provided in the message. Impact can refer to effects on the application, or the system
- **Cause and Corrective Action.** Where it is useful to the user and appropriate to the message, the following tables provide a brief statement of what caused the event that prompted the message to be displayed and what, if anything, the user can or should do about it

A.2 User Interface Messages

The User Interface Messages are presented by subsystem in the following order:

A.2.1	CLS
A.2.2	DMS
A.2.3	DSS
A.2.4	INS
A.2.5	CSS
A.2.6	MSS
A.2.7	PLS
A.2.8	DPS
A.2.9	OMS
A.2.10	SSS
A.2.11	DPL

A.2.1 Client Subsystem (CLS)

The following tables (A.2.1-1 through A.2.1-4) present user interface messages generated by tools associated with the CLS subsystem.

Table A.2.1-1. User Registration Tool User Messages

Message Text	Impact	Cause and Corrective Action
Error: Please enter a User Verification Key	This is a mandatory field; so the system does not allow users to submit the form without completing the indicated area.	Entry was not completed. For account verification, users must supply a password or "key", for instance, mother's maiden name, a secret code word, or a string of nonsense letters.
Error: Please enter a First Name	This is a mandatory field, so the system does not allow users to submit the form without completing the indicated area.	Entry was not completed. Click OK on the error message popup window. Then, complete the missing information.
Error: Please enter a Last Name	This is a mandatory field, so the system does not allow users to submit the form without completing the indicated area.	Entry was not completed. Click OK on the error message popup window. Then, complete the missing information.
Error: Please enter an Email Address	This is a mandatory field, so the system does not allow users to submit the form without completing the indicated area.	Entry was not completed. Click OK on the error message popup window. Then, complete the missing information.
Error: Please enter a city	This is a mandatory field, so the system does not allow users to submit the form without completing the indicated area.	Entry was not completed. Click OK on the error message popup window. Then, complete the missing information.
Error: Please enter State/Province	This is a mandatory field, so the system does not allow users to submit the form without completing the indicated area.	Entry was not completed. Click OK on the error message popup window. Then, complete the missing information.
Error: Please enter a zip or postal code	This is a mandatory field, so the system does not allow users to submit the form without completing the indicated area.	Entry was not completed. Click OK on the error message popup window. Then, complete the missing information.
Error: Please enter phone number where you can be reached	This is a mandatory field, so the system does not allow users to submit the form without completing the indicated area.	Entry was not completed. Click OK on the error message popup window. Then, complete the missing information.

Table A.2.1-2. EOSView User Messages (1 of 8)

Message Text	Impact	Cause and Corrective Action
PROBLEM WITH FILE: Either file is not an HDF file or read permission is not set for this file.	The file selected by the user in the file selection dialog cannot be viewed with EOSView.	Re-select "File-Open" from EOSView Main Window and pick a different file.
Display for this object not implemented.	User selected an HDF object that cannot be displayed.	Select a different HDF object.
Input error - integer input must be in the range of: X = 0 - <number> Y = 0 - <number>	Integer values entered were out of range.	Re-enter values in the range listed.
Error reading from SDS. Unable to get stats.	EOSView could not read the selected SDS to calculate statistics.	None
Error creating stats list.	EOSView had an error while trying to display statistical data.	None
Error attaching to Vdata.	Error occurred while trying to read from selected VData.	None
Error setting field <fieldname>.	Error occurred while trying to read from selected VData.	None
Error in Vseek with field <fieldname>	Error occurred while trying to read from selected VData	None
Error reading from field <fieldname>	Error occurred while trying to read from selected VData	None
Statistics will not be calculated for character data.	User requested to see statistics for tabular data but cannot be done for character arrays.	None
Unable to set help directory.	EOSView is unable to load hypertext help file.	Select hypertext help file (eosview, csc) in the file selection dialog.
File needs to be an HDF file.	Running EOSView with a script and file passed in was not in HDF format.	None
File must contain at least one raster image.	Running EOSView with a script requesting animation but input file has no raster images.	None
File: <filename> Line: <number> Bad memory allocation size: (<number> bytes)	Tried to allocate zero or fewer bytes of memory.	None
File: <filename> Line: <number> Error allocating memory (<number> bytes), Exiting...	Not enough memory for allocation.	EOSView exits.

Table A.2.1-2. EOSView User Messages (2 of 8)

Message Text	Impact	Cause and Corrective Action
File: <filename> Line: <number> Error reading file: <filename>	Running EOSView with a script containing an input file that cannot be opened.	None
Line maximum reached. Ignoring rest	Text display has reached maximum number of lines to display.	Not all of the text in the file is available for viewing.
Out of space	Trying to reallocate memory with none available.	Text display operation ceases.
Corrupt Data Encountered. Image Cannot be made!	During pseudo-color image creating bad data was detected.	Image is not displayed.
No items to view	HDF file selected contains no objects.	File contents window is empty.
Unable to create SLIST	Unable to create list of HDF objects contained in selected file.	User is not allowed to view file objects.
Unable to create contents window	Unable to create window to display list of HDF objects contained in selected file.	User is not allowed to view file objects.
Unable to open Field List Window.	Unable to open a window containing list of fields in VData.	User is not allowed to view VData.
Unable to create Fields List.	Unable to create list of VData field names for display.	User is not allowed to view VData.
At least one Field must be selected.	To display a table or plot at least one VData field name must be selected.	Select a field.
Can't open text window.	Unable to open window containing HDF attributes.	Text data cannot be viewed.
No attributes to display.	Selected object contains no attributes.	None
File: <filename> Line: <number> Error with file id.	Bad file id returned in file open.	Data can not be viewed.
File: <filename> Line: <number> Error with Sdrefindex.	Error converting reference id to index.	SDS data is not displayed.
File: <filename> Line: <number> Error with Sdselect.	Error selecting SDS data in file.	SDS data is not displayed.
Unable to attach to <grid name> to view Grid Information.	Grid attach failed.	Grid information cannot be viewed.
Unable to open grid to view Grid Information	Grid open failed.	Grid information can not be viewed

Table A.2.1-2. EOSView User Messages (3 of 8)

Message Text	Impact	Cause and Corrective Action
Unable to attach to <grid name> to view Projection Information.	Grid attach failed.	Projection information cannot be viewed.
Unable to open grid to view Projection Information	Grid open failed.	Projection information can not be viewed
Unable to retrieve projection information	Grid projection information retrieval failed.	Projection information can not be viewed
Unable to retrieve grid information	Grid information retrieval failed.	Grid information can not be viewed
ERROR: Quantization of 24-bit image failed!	Converting 24-bit image to 8-bit image failed.	Image is not available for viewing.
ERROR: Could not write 8 bit image	8-bit image data copy error occurred.	Image is not available for viewing
ERROR: Unable to set HDF Palette!	Image palette data could not be set.	Image is not available for viewing
ERROR: Unable to create 8 bit image.	Could not write 8 bit image to temporary file.	Image is not available for viewing
Can Plot on 1 or 2 Fields - please re-select	User selected three or more fields for plotting.	De-select fields until less than three are selected.
Field <fieldname> is character data. Only numeric data may be selected for plotting.	User selected character data for plotting.	De-select character data field.
Field <fieldname> has an order of <number> and must be plotted alone.	Field has multiple numbers per record and can not be plotted against another field.	None
Error in Vssetfields	VData operation failed	VData cannot be viewed.
Error at Vsseek	VData operation failed	VData cannot be viewed.
Error at Vsread	VData operation failed	VData cannot be viewed.
No groups to display	HDF file has no data	File is closed.
Error reading SDS data. No data displayed.	Error in SDS operation.	SDS data is not available for viewing.
File: <filename> Line: <number> Error in reading group items.	Error trying to get group items.	HDF file can not be viewed.
File: <filename> Line: <number> Bad data pointer for ReadHDFImage	Image data is null.	Image cannot be displayed.
File: <filename> Line: <number> Error reading Raster image	Error reading raster image data from file	Image cannot be displayed
File: <filename> Line: <number> Error reading file <filename>	Error during file read operation.	Selected data cannot be viewed.

Table A.2.1-2. EOSView User Messages (4 of 8)

Message Text	Impact	Cause and Corrective Action
File: <filename> Line: <number> Error closing file	Error during file close operation	None
File: <filename> Line: <number> Error in allocation node memory	Not enough memory for new data node.	This object is not available for selection
File: <filename> Line: <number> Unknown SDS data type	Data stored in this SDS is not HDF standard	Data is not displayed.
File: <filename> Line: <number> Error in DFR8nimages	Error while trying to determine the number of 8-bit images in the file.	8-bit image data is not checked in this file.
File: <filename> Line: <number> Error in DFR24nimages	Error while trying to determine the number of 24-bit images in the file.	24-bit image data is not checked in this file.
Error initializing IDL - EOSView must exit!	EOSView found a problem in IDL commands file (eosview.dat)	EOSView exits.
Unable to set IDL Directory.	EOSView could not find IDL commands file.	Select the file eosview.dat in file selection dialog.
Unable to create list box lists!	Lat/Lon cursor position window lists can not be created	User is not allowed to position cursor on selected lat/lon.
Data invalid - input must be <INTEGER/FLOAT>! Maximum value: <number>	User entered data out of type or range for the field.	Re-enter data that meets warning window requests.
Coordinates entered are outside the boundaries of this GRID.	User entered valid coordinates but area is not covered by selected grid.	Re-enter coordinates or look at grid information to determine grid coverage.
Failure in Gdgetpixels	Error in getting pixel location	Cursor positioning does not function for this request.
Error receiving Grid projection/pixel information.	Error in location proper pixel.	Cursor positioning does not function for this request.
Error getting Lat/Lon from x-y position	Error in locating proper pixel	Cursor positioning does not function for this request.
File: <filename> Line: <number> NULL ximage	Error occurred while converting image data to ximage.	Requested image is not displayed.
Unable to attach to <Point name> to view Point Level Info	Error attaching to selected point.	Point Level data is not displayed.
Unable to open point to view Point Level Info.	Error opening to selected point.	Point Level data is not displayed.
No levels exist for point.	Selected point contains no level data.	Level information cannot be viewed.

Table A.2.1-2. EOSView User Messages (5 of 8)

Message Text	Impact	Cause and Corrective Action
Unable to create levels list.	List to display level information had an error.	Point Level information is not available for viewing.
Error getting fields	Error while getting Point Level Field names.	Point Level information is not available for viewing.
Unable to attach to <swath/grid name> to view attributes.	Error attaching to selected swath/grid.	Swath/Grid attribute data cannot be displayed.
Unable to open swath to view attributes.	Error opening selected swath.	Swath attribute data cannot be displayed.
Unable to open grid to view attributes.	Error opening selected grid.	Grid attribute data cannot be displayed.
Unable to attach to <swath/grid name> to view dimensions.	Error attaching to selected swath/grid.	Swath/Grid dimensions data cannot be displayed.
Unable to open swath to view dimensions.	Error opening selected swath.	Swath dimensions data cannot be displayed.
Unable to open grid to view dimensions.	Error opening selected grid.	Grid dimensions data cannot be displayed.
Unable to open grid to view Data Fields	Error opening selected grid.	Grid data fields cannot be displayed.
Unable to attach to <grid name> to view Data Fields.	Error attaching to selected grid.	Grid data fields cannot be displayed.
Unable to open swath to view Geolocation/Data Fields	Error opening selected swath.	Swath Geolocation/Data fields cannot be displayed.
Unable to attach to <swath name> to view Geolocation/Data Fields.	Error attaching to selected swath.	Swath Geolocation/Data fields cannot be displayed.
Unable to attach to <swath name> to view Indexed Mapping.	Error attaching to selected swath.	Swath Indexed Mapping cannot be displayed.
Unable to open swath to view Indexed Mapping	Error opening selected swath.	Swath Indexed Mapping cannot be displayed.
Unable to open swath to view Indexed Mapped Sizes	Error opening selected swath.	Swath Indexed Mapped Sizes cannot be displayed.
Unable to attach to swath to view Indexed Mapped Sizes	Error attaching to selected swath.	Swath Indexed Mapped Sizes cannot be displayed.
Error reading from Swath/Grid Fields. Unable to get stats.	Error reading swath/grid data fields.	Requested stats are not displayed.
This swath contains no attributes.	Data request cannot be filled since data is not present.	None
This grid contains no attributes.	Data request cannot be filled since data is not present.	None
This point contains no attributes.	Data request cannot be filled since data is not present.	None
This swath contains no Dimensions.	Data request cannot be filled since data is not present.	None

Table A.2.1-2. EOSView User Messages (6 of 8)

Message Text	Impact	Cause and Corrective Action
This grid contains no Dimensions.	Data request cannot be filled since data is not present.	None
Unable to create Dimensions list.	Error occurred while creating list of dimensions.	Swath/Grid dimension data cannot be viewed.
This Grid contains no Data Fields.	Data request cannot be filled since data is not present.	None
This Swath contains no Geolocation/Data Fields.	Data request cannot be filled since data is not present.	None
Unable to create Geolocation/Data Fields list.	Error occurred while creating list of geolocation/data fields.	Geolocation/Data Fields data cannot be viewed.
2 items already selected!	User tried to selection more than two dimensions for viewing.	Maximum number of dimensions to view is 2. Either de-select a dimension or hit the OK button.
Must select at least one dimension!	User must select at least one dimension for viewing.	Select a dimension checkbox and hit the OK button.
Input problem! Dimension: <dimension name> Size: <number> Must follow: Start + Stride * (Edge - 1) + 1 <= Size	User altered start/stride/edge values for subsetting but entered values out of range.	Re-enter start/stride/edge values following formula provided in dialog.
This Swath contains no Geolocation Mappings.	Data request cannot be filled since data is not present.	None
Unable to create Geolocation Mappings list.	Error occurred while creating list of geolocation mappings.	Geolocation mappings data cannot be viewed.
This Swath contains no Indexed Mapping.	Data request cannot be filled since data is not present.	None
Unable to create Indexed Mapping list.	Error occurred while creating list of indexed mapping.	Indexed mapping data cannot be viewed.
Unable to create Indexed Mapping Sizes list.	Error occurred while creating list of indexed mapping sizes.	Indexed mapping size data cannot be viewed.
This Indexed Mapping contains no data.	Data request cannot be filled since data is not present.	None
No global attributes in file.	Data request cannot be filled since data is not present.	None
Can't open main EOSView window	Unable to open main window.	EOSView terminates.
Help file is unreadable please choose another.	Selected help file is not readable.	Select eosview.csc from the file selection dialog.
Invalid help file, please choose another.	Selected file is not the EOSView help file.	Select eosview.csc from the file selection dialog.
No dimension attributes.	Data request can not be filled since data is not present.	None

Table A.2.1-2. EOSView User Messages (7 of 8)

Message Text	Impact	Cause and Corrective Action
File: <filename> Line: <number> Error getting file.	Selected file had a problem.	Select another file in the file selection dialog.
File <filename> contains no Raster Images to display.	File name passed into EOSView script file for image display contains no images.	EOSView starts but image display does not occur.
File <filename> does not contain <number> Raster Images.	File name passed into EOSView script file to display image <number> does not contain <number> images.	EOSView starts but image display does not occur.
Input file <filename> is not an EOSView Script File.	File name passed into EOSView as a script file is not in script file format.	EOSView starts and main window displays.
Unable to create table save element	Not enough memory for table save element exists.	Table save operation cannot be performed.
This file exists - must create new file.	User tried to save table to a file that already exists.	Enter file name that does not exist. Table must be saved to a new file.
Must enter a file name!	User tried to write table to file with no name.	Enter valid file name in file open dialog.
Unable to open file <filename>	Tried to save table to a file that could not be opened.	May want to check to see if user has write permission in this directory.
Error attaching to Vdata. Save aborted.	Error occurred while attaching to Vdata.	Table save operation is canceled.
Error setting Vdata fields. Save aborted.	Error occurred while setting Vdata fields.	Table save operation is canceled.
Unable to allocate buffer to read data.	Not enough memory to read table for table save operation.	Table save operation is canceled.
Vdata seek failed.	Error occurred in Vsseek operation.	Table save operation is canceled.
Vdata read failed.	Error occurred in Vsread operation.	Table save operation is canceled.
Error writing to file <filename>.	Error occurred while writing table data to file.	Table save operation is canceled.
Error reading data. Save option aborted.	Error occurred reading table data.	Table save operation is canceled.
Data written to file <filename>	Table save operation worked correctly.	None
Error Reading Animation Images.	Error reading animation images from script file.	Animation operation does not occur.
Error Reading Animation Images: no image.	No image data detected in file sent in from EOSView script file for animation.	Animation operation does not occur.

Table A.2.1-2. EOSView User Messages (8 of 8)

Message Text	Impact	Cause and Corrective Action
Animate allocation error: Animation will be truncated.	Not enough memory to animate all images in file.	Animation occurs but not all images in file are used.
File: <filename> Line: <number> Not enough images for animation.	File sent into EOSView script file for animation contains less than 2 images.	EOSView starts but animation does not occur.

The Java DAR Tool (JDT) issues the following messages informing the user of any problems that may have occurred during the processing of a system request.

Table A.2.1-3. Java DAR Tool (JDT) User Messages (1 of 2)

Error Code	Description
1000	Repeat Interval must be greater than 0
1001	Minimum Look Angle must be less than the Maximum Look Angle
1002	Acquisition Window must be less than, or equal to, the Repeat Interval
1003	Repeat Interval must be less than, or equal to, the DAR Lifetime
1004	DAR Lifetime must be 18 or less when Implementation Urgency is set to 'Urgent'
1005	If Coverage Method is sampled, Coverage Amount must be less than 100%
1006	Cross Track Fragmentation and Ground Campaign cannot both be set to 'Yes'
1007	Minimum Sample Length cannot exceed Maximum Sample Length
1008	If Avoid Clouds is set to 'No', Coverage Amount must be greater than 5%
1009	Minimum Look Angle cannot exceed Maximum Look Angle
1010	Minimum Sun Angle cannot exceed Maximum Sun Angle
1011	Minimum Look Angle cannot exceed 8.55
1012	Maximum Look Angle cannot exceed 8.55
1013	Minimum Sun Angle cannot exceed 90.00
1014	Maximum Sun Angle cannot exceed 90.00
1015	Specific Look Angle cannot exceed 8.55
1016	View Swath ID must be a value between 1 and 7
1017	Acquisition Window must be less than, or equal to, the DAR Lifetime
1018	DAR Lifetime Start cannot exceed DAR Lifetime End
1019	A minimum of 3 points is required to create a polygon
1020	The polygon does not have a valid shape
1021	If one Look Angle sign is set to '+/-', the other must also be set to '+/-'
1022	Adding the selected point creates a shape that is not a polygon
1023	Acquisition Window must be greater than 0
1024	A submitted DAR cannot be modified
1025	Is an unauthorized user, and cannot submit a DAR

Table A.2.1-3. Java DAR Tool (JDT) User Messages (2 of 2)

Error Code	Description
1026	Spatial coordinates must have at least 3 points in order to submit a DAR
10000	Unable to determine results status
10001	Search failed. Please try again later.
10002	Search failed. Please try again later.
10003	Search completed with errors.
10004	No results found.
10005	Partial results returned.
10006	Search Complete.
10007	Not all XARs have been returned.
10008	Some scenes may be missing.

A.2.2 Data Management Subsystem (DMS)

Table A.2.2-1 presents user interface messages for the Data Dictionary Maintenance Tool.

Table A.2.2-1. Data Dictionary Maintenance Tool User Messages (1 of 3)

Message Text	Impact	Cause and Corrective Action
Failed	Cannot proceed with the subsequent and corresponding actions.	The user action did not result in the desired program function. Check prior entries before action entries.
Can't undo	Cannot cancel previous action.	Cancellation is not possible.
The Query failed for all the collections.	Query cannot be performed.	Could not perform the query for all the collections.
The Query failed for some of the collections	Query cannot be completely performed.	Could not perform the query for some of the collections
The query succeeded for all the collections	N/A	Informational message.
The Query succeeded for some collections	N/A	Informational message.
Error connecting to Data Dictionary server	Data dictionary server not connected.	Could not connect to the server. Check the connection to the server from outside the program.
Querying database	N/A	Informational message.
Updating database	N/A	Informational message.
The update was successful	N/A	Informational message.
The update failed.	Database cannot be updated.	Updating the database did not work. Check the action and try again

Table A.2.2-1. Data Dictionary Maintenance Tool User Messages (2 of 3)

Message Text	Impact	Cause and Corrective Action
No attribute has been specified	No further action on attributes occurs.	Attributes are not specified. Specify the attributes.
A valid value has not been specified	No further action occurs.	A value was not specified. Specify a value.
Unable to connect to Data Dictionary server. Please try later.	Data dictionary server not connected.	Could not connect to the server. Check the connection to the server from outside the program.
The query matched no items in database	N/A	Informational message.
The query failed	N/A	Check the action and try again.
Unknown internal error. Please try again.	The connection to the server is not available.	Check the server connection.
Cannot open valids file <valids filename>	Valids file is not available.	The valids file specified does not exist. Specify the correct valids file.
Saved file <filename>	N/A	Informational message.
Data Dictionary updated	N/A	Informational message.
You have pending actions, which will be lost if you exit. Do you really want to exit?	Loss of pending actions.	User trying to exit before confirming the database changes. Confirm before exiting.
Do you really want to exit?	Seeks user confirmation.	User confirmation required before exiting Confirm before exiting
Unable to open specified file. Try another filename.	File specified is not available.	The file specified by the user cannot be opened. Specify correct filename.
You have made changes to <item name>, which will be lost if you proceed. Do you want to continue?	Loss of current changes.	Seeking user confirmation before exiting the current action Confirm before proceeding.
Query failed	N/A	Database search resulted in no selections.
Unable to connect to Data Dictionary server. Please try again later.	Connection to DDICT server not available.	Problem connecting to DDICT server. Exit and try later.
The query failed, possibly due to a server problem	Connection to DDICT server not available.	Problem connecting to DDICT server. Exit and try later.
The query matched no items in database	N/A	No items were selected from the database.
Unable to open output file <filename>	Output file not available.	<filename> does not exist. Check its presence.

Table A.2.2-1. Data Dictionary Maintenance Tool User Messages (3 of 3)

Message Text	Impact	Cause and Corrective Action
Not available < List of items not available>	File is not available.	Configuration File Error. Use the correct Configuration File with all the entries required
No file specified. Please select or type a file name	File not available.	A filename has not been specified. Select the proper filename.
<filename> does not exist. Please try again	File not available.	File selected does not exist. Select a file that is present.
Unable to access <filename>. Please try again.	File not accessible.	Cannot access the file specified. Check the presence of the file specified.
<filename> is a directory. Please also specify a file.	File not available.	File selected does not exist. Specify a filename instead of the directory.
<filename> is not a proper file. Please try again.	File not available.	File selected is not proper. Specify a proper filename.
<filename> already exists and will be overwritten. Do you want to continue?	A file is overwritten.	Use of an existing file name. Use a different filename to avoid overwriting an existing file.
Value missing for required field. Please specify a value.	Cannot proceed with the action.	Improper entry in the desired field. Make a proper entry.
Elements in valids section of data file not understood	The data file is not usable.	The valids file is not correct. Use the proper valids file.
Elements in valids section of data file not understood	The data file is not usable.	The valids file is not correct. Use the proper valids file.

A.2.3 Data Server Subsystem (DSS)

Tables A.2.3-1 through A.2.3-2 present user interface messages for the Science Data Server Operator GUI, the Data Distribution Operator GUI.

Table A.2.3-1. Science Data Server Operator GUI User Messages

Message Text	Impact	Cause and Corrective Action
No Selected Request – Please select one.	No operations on request are performed.	Select a current request.
Descriptor Information not Available.	Information on a particular descriptor file is not available.	Could generally happen because ESDT was installed from a different directory. Copy descriptor to original place.
Science Data Server Not Found.	No operations are possible.	Bring Science Data Server up.
Possible Server Connection Error – Try Reconnecting.	A connection to the Science Data Server is not possible. No operations possible.	Try clicking on the Refresh/Reconnect button under the Data Type tab.
Datatype Successfully Added.	Datatype is ready to be used.	None.
Failure to Add Datatype.	Datatype is not available for use.	Check Science Data Server error logs, fix the error, and try again.
Failure to Load Descriptor File.	Information on Descriptor File is not available.	Look for file in original installation directory.
Changing Request Priority – Please wait...	Request priority is being changed.	Informational message only. No corrective action is needed.

Table A.2.3-2. Data Distribution Operator GUI User Messages (1 of 2)

Message Text	Impact	Cause and Corrective Action
DDist Refresh Failure.	DDist Refresh Error. Dialog Message GUI was not able to get new request list from server.	Check the database with Mode. Check the DBOVERRIDE in the Configuration File.
DDist Mark Shipped Failure.	GUI received failure from server. Request was not marked shipped.	Check request state. This may not be a valid operation. Check for DDist Server running.
DDist Set Priority Failure.	GUI received failure from server. Request set priority failed.	Check request state. This may not be a valid operation. Check for DDist Server running.
DDist Cancel Failure.	GUI received failure from server. Request was not canceled.	Check request state. This may not be a valid operation. Check for DDist Server running.
DDist Resume Failure.	GUI received failure from server. Request was not resumed.	Check request state. This may not be a valid operation. Check for DDist Server running.
DDist Resume All Failure.	GUI received failure from server. Requests were not resumed.	Check request state. This may not be a valid operation. Check for DDist Server running.
DDist Suspend Failure.	GUI received failure from server. Request was not suspended.	Check request state. This may not be a valid operation. Check for DDist Server running.
DDist Suspend All Failure.	GUI received failure from server. Requests are not submitted in a SuspendAll state.	Check for DDist Server running.
No DDist request selected. Please select one.	An operation was performed without selecting a request from the Scrolled list.	Select a request from the list, then retry the operation.
Invalid text field entry	Invalid data was entered.	Reenter valid data and retry operation.
Cannot create the DsDdDistRequestList	The Request List was not created.	Select Refresh to try again. Check the database with Mode.

Table A.2.3-2. Data Distribution Operator GUI User Messages (2 of 2)

Message Text	Impact	Cause and Corrective Action
DsDdRequestMgrC create handle error.	Error cannot create request Manager Handle to the Data Distribution Server.	Select Refresh to try again. Check the database with Mode.
Cannot create connection pool.	Attempt to create connection pool to database failed.	Select Refresh to try again. Check the database with Mode.
Cannot get a dbInterface connection pool.	Attempt to get a dbInterface from connection pool to database failed.	Select Refresh to try again. Check the database with Mode.
DsDdRequestMgrC Mark Shipped Failure.	GUI received failure from server. Request was not Mark Shipped.	Check request state. This may not be a valid operation. Check for DDist Server running.
DsDdRequestMgrC Set Priority Failure.	GUI received failure from server. Request priority was not changed.	Check request state. This may not be a valid operation. Check for DDist Server running.
DsDdRequestMgrC Cancel Failure.	GUI received failure from server. Request was not canceled.	Check request state. This may not be a valid operation. Check for DDist Server running.
DsDdRequestMgrC Resume Failure.	GUI received failure from server. Request was not resumed.	Check request state. This may not be a valid operation. Check for DDist Server running.

A.2.4 Ingest Subsystem (INS)

Table A.2.4-1 describes the user interface messages for the Ingest Operator GUI. Table A.2.4-2 describes the user interface messages associated with the Ingest Regenerate Failed PDR tool.

Table A.2.4-1. Ingest Operator GUI User Messages (1 of 4)

Message Text	Impact	Cause and Corrective Action
Media Type needs to be set.	Without this information, media ingest cannot be submitted.	Select a media type from the Media Type combo box.
Stacker ID needs to be specified.	Without this information, media ingest cannot be submitted.	Enter stacker id in the Stacker ID field.
Stacker Slot ID needs to be specified.	Without this information, media ingest cannot be submitted.	Enter stacker slot id in the Stacker Slot ID field.
Data Provider ID needs to be provided.	Without this information, media ingest cannot be submitted.	Select a data provider from the Data Provider combo box.
Data Provider is not authorized for ingest.	Unable to perform Media Ingest for this data provider.	Resolve the issue with this data provider.
Volume ID is empty.	Without this information, media ingest cannot be submitted.	Enter media volume id in the Media Volume ID (Barcode) field.
Data Delivery Record location needs to be specified.	Without this information, media ingest cannot be submitted.	Click on one of two provided Data Delivery Record File Location.
Data Delivery Record filename needs to be specified.	Without this information, media ingest cannot be submitted.	Enter data delivery record filename in the Data Delivery Record File Name field.
Can not obtain new request id from database.	Without this information, media ingest cannot be processed.	Ask DBA to correct this problem.
Unable to allocate a media device.	Without the allocation of the media device, media ingest cannot be processed.	Make sure the device driver has been brought up in the pseudo mode.
Unable to request mount media service.	Without the mount, media ingest cannot be processed.	Inform Storage Management personnel to correct this problem.
Can not obtain Data Delivery Record file.	Without the data delivery record file, media ingest cannot be processed.	If the data delivery record is embedded in media, make sure the staging disk has been created to receive the file. If the data delivery record is on network, make sure the ftp network is OK.

Table A.2.4-1. Ingest Operator GUI User Messages (2 of 4)

Message Text	Impact	Cause and Corrective Action
Unable to copy data files to staging disk.	Without the data files, media ingest cannot be processed.	Make sure the staging disk has been created to receive data files and there is enough disk space on the system.
Dismount media failure.	Media ingest cannot be processed.	Inform Storage Management personnel to correct this problem.
Deallocate device failure.	Media ingest cannot be processed.	Inform Storage Management personnel to correct this problem.
Unable to process the request.	Media ingest cannot be processed.	Make sure Request Manager server is up and ready to receive the request.
Media Ingest Request completed.	N/A.	N/A.
Unable to obtain data provider list.	“Modify External Data Provider/User Information” screen cannot be used to update InExternalDataProvider Info table.	Ask DBA to correct this database problem.
Update is not allowed without password confirmation.	Unable to perform password update.	Click on password confirmation OK button to perform password confirmation prior to password update.
Invalid Old Password.	Unable to perform password confirmation.	Re-enter the correct old password.
New password does not match what was originally typed.	Unable to perform password confirmation.	Re-enter the correct new password.
Unable to obtain the system information.	“Modify System Parameters” screen cannot be used to update the InSystemParameters table.	Ask DBA to correct this database problem.
Can not obtain selected data provider information.	“Modify External Data Provider/User Information” screen cannot be refreshed with the updated information.	Ask DBA to correct this database problem.
Volume Threshold exceeds the system volume threshold.	Cannot update InExternalDataProvider Info table for the specified data provider.	Make sure the new volume threshold entered does not exceed the allowed system volume threshold.
Request Threshold exceeds the system request threshold.	Cannot update InExternalDataProvider Info table for the specified data provider.	Make sure the new request threshold entered does not exceed the allowed system request threshold.

Table A.2.4-1. Ingest Operator GUI User Messages (3 of 4)

Message Text	Impact	Cause and Corrective Action
Can not update selected data provider information.	Cannot update InExternalDataProvider Info table for the specified data provider.	Ask DBA to correct this database problem.
Can not update the system threshold information.	Cannot update InSystemParameters table with new values.	Ask DBA to correct this database problem.
SMC History File Build Failed.	Unable to build SMC history file.	Ask DBA to correct this database problem.
Destination MUST be provided.	Cannot perform file transfer.	Enter transfer destination in the Transfer Destination field.
Select new file and push the file selection OK button.	Cannot perform file transfer.	Enter new file in the Selection field.
Destination MUST be host/path (e.g., kodiak/tmp).	Cannot perform file transfer.	Correct the destination syntax error.
FTP failed.	File failed the ftp file transfer.	Make sure FTP connection is OK.
Value entered is not a valid integer.	Unable to monitor/control the specified request ID.	Re-enter a valid integer request ID.
Unable to obtain the data provider list.	Unable to build the list for Data Provider combo box on Monitor/Control screen.	Ask DBA to correct this database problem.
No data matching search criteria.	Unable to display the request text view information for the search criteria.	Ask DBA to correct this database problem.
Data not found for search criteria.	Unable to display the request text view information for the search criteria.	Ask DBA to correct this database problem.
Can not read the request information file.	Unable to display request/granule text view information in the text browser.	Make sure the file permission is OK.
Priority Level needs to be set.	Unable to change the priority for the selected request.	Select the desired priority form the Priority combo box.
Unable to process request control.	Unable to perform the selected request control.	Make sure Request Manager server is up to receive the appropriate rpc call.

Table A.2.4-1. Ingest Operator GUI User Messages (4 of 4)

Message Text	Impact	Cause and Corrective Action
Request Control Status: Success.	N/A	N/A
Unable to obtain data provider list.	Unable to build the list for Data Provider combo box on History Log screen.	Ask DBA to correct this database problem.
Unable to obtain data type list.	Unable to build the list for Data Type combo box on History Log screen.	Ask DBA to correct this database problem.
Unable to obtain final request status list.	Unable to build the list for Final Request Status combo box on History Log screen.	Ask DBA to correct this database problem.
Invalid Stop Time.	Unable to display the History Log information.	Re-enter a valid stop time.
Invalid Start Time.	Unable to display the History Log information.	Re-enter a valid start time.
Invalid time interval.	Unable to display the History Log information.	Re-enter correct start and stop times, i.e., the stop time has to be after the start time.
Unable to read the history log.	Unable to display History Log information.	Make sure the file permission is OK.
Detail Level needs to be set.	Unable to display History Log information.	Click on the desired detail level toggle button.
Can not retrieve data based on search criteria.	Unable to display History Log information.	Ask DBA to correct this database problem.
Data not found for search criteria.	Unable to display History Log information.	Re-enter the search criteria.
Value entered is not a valid integer.	Unable to display History Log information.	Re-enter a valid integer value.
Invalid input value.	Unable to display History Log information.	Re-enter a valid input value.
RequestID selected is not a valid integer.	Unable to display granule level information.	Ask DBA to correct this database problem.
Can not obtain data type for selected RequestID.	Unable to display granule level information.	Ask DBA to correct this database problem.
Printer name is not specified.	Unable to print the currently displayed information.	Specify a valid printer name.

**Table A.2.4-2. Ingest Regenerate Failed PDR Tool User Messages
(1 of 2)**

Message Text	Impact	Cause and Corrective Action
Unable to parse the PDR file.	The PDR file cannot be used to generate granule PDRs.	Either correct the PDR or use a different one.
Unable to open the PAN file.	The granule PDRs cannot be generated.	Check the PAN file name and path for validity and accessibility.
PAN file is not a long PAN.	The granule PDRs cannot be generated.	Enter a PAN file name, which is a long PAN.
Number of files is not the same in the PDR and PAN.	The granule PDRs cannot be generated.	Enter a PDR and its corresponding PAN file.
Unable to create all of the PDRs for the failed granules.	Not all of the failed granules had PDRs generated.	Examine the previous error messages to determine which granule had a problem. Look in the application log file to determine the cause of the failure.
InDAN::GetDataType returned an error for granule.	The PDR for this and subsequent granules cannot be generated.	Examine the application log to determine the cause of the failure.
PAN file is not formatted correctly.	The rest of the granules cannot have their PDRs generated.	Examine the PAN file to determine how the format is incorrect.
Unable to allocate memory for DataTypeList.	The rest of the granules cannot have their PDRs generated.	Examine the host for memory problems.
InDAN::GetGranuleVolume returned an error for granule.	This and subsequent granules cannot have their PDRs generated.	Examine PDR to make sure the volumes are set correctly and examine the application log file for errors.
InDAN::GetXAREntry returned an error for granule.	This and subsequent granules cannot have their PDRs generated.	Examine application log file for errors.
Unable to allocate memory for DataTypeList.FileList.	This and subsequent granules cannot have their PDRs generated.	Examine the host for memory problems.
InDAN::GetFileInfo returned an error for granule.	This and subsequent granules cannot have their PDRs generated.	Examine PDR to make sure the file information is set correctly and examine the application log file for errors.
The creation of the new PDR file failed.	This and subsequent granules cannot have their PDRs generated.	Look in the application log file to determine the cause of the failure.
Error occurred when trying to delete the new PDR file.	The generated PDR file did not get deleted from its creation directory.	If the generated PDR file is still in the creation directory, delete it.

**Table A.2.4-2. Ingest Regenerate Failed PDR Tool User Messages
(2 of 2)**

Message Text	Impact	Cause and Corrective Action
Unable to copy the new PDR file into the Polling directory.	The generated PDR file did not get copied to the polling directory.	Possibly have entered the Polling directory path incorrectly. In this case, need to rerun the program with the correct path. Another possible cause is that the Polling directory is not visible from the machine on which the program is running. In this case, need to ftp the PDR file to the polling directory if desired.

A.2.5 Communications Subsystem (CSS)

Table A.2.5-1 describes the user interface messages for the ECS Subscription Service User Messages.

Table A.2.5-1. ECS Subscription Service User Messages (1 of 3)

Message Text	Impact	Cause and Corrective Action
Failed to create subscription.	Edit subscription window is not populated, therefore; user can not edit the subscription	If a subscription was not selected on the main screen and the user goes to edit window. Select a subscription and then go to edit window.
Refresh Subscription Failed.	Subscriptions are not refreshed or fetched from the database	Subscription server may be down. Check to see if the Server is running and try again.
MSS server is not running, enter email address.	Cannot get the user profile.	The MSS user profile server that was suppose to provide the user's email address is not running. Enter the e-mail address manually.
Enter the Email Address (Message).	Cannot talk to the MSS server.	The MSS server is running but you cannot get the information. Enter the email address manually.
Modification of qualifiers is not supported (Message).	Cannot update the qualifiers of an existing subscription.	Update of qualifier is not implemented.
Couldn't connect to the server.	Event Browser does not come up.	Event server is down. Need to get the server running.
Error refreshing events.	Event Browser does not come up.	Event server could be down. Need to get the server running.
Invalid Start Date.	Subscription is not submitted.	User has entered an invalid start date for subscription. Re-enter and re-submit the subscription.
Fill all the fields on the form.	Subscription is not submitted.	User did not fill out all the required fields in the add subscription form. Fill in all the fields and re-submit the subscription.
Error in creating subscription.	Subscription is not submitted.	Could not create the subscription with the user input. Try submitting it again and make sure the fields are filled in correctly
Error in submitting subscription.	Subscription is not submitted.	Could not submit the subscription, server could be down. Check to see if the server is running properly.

Table A.2.5-1. ECS Subscription Service User Messages (2 of 3)

Message Text	Impact	Cause and Corrective Action
There is no subscription to submit.	Subscription is not submitted.	User tried submitting without creating a subscription.
Failed to create subscription.	Subscription is not updated.	User did not provide the right data to update a subscription.
Invalid expiration date.	Subscription is not updated.	User entered an invalid expiration date for updating a subscription. Reenter the information
Couldn't update the selected subscription.	Subscription is not updated.	Subscription server could be down.
Error Selecting Subscription.	Subscription is not selected.	User cannot select a subscription on the main screen. System may be down or slow.
Can't filter, collector is empty.	Filter subscription does not display requested information.	User tried filtering the subscription and it did not happen. There might be some problem with the database or the server could be down.
Must fill in valid Event ID.	Subscription is not deleted.	User tried to cancel a subscription for a particular event and did not enter anything in Event ID field. Enter a valid event ID and try again.
Must fill in User ID field.	Subscriptions are not deleted.	User tried to cancel a subscription for a particular user and did not enter anything in the User ID field. Enter a valid user ID and try again.
Must fill in proper date.	Subscriptions are not deleted.	User tried to cancel a subscription expiring on a particular date and did not enter anything in date field.
Must select a category to delete events from.	Subscription is not deleted.	User tried to delete a subscription and did not select event, user or expiration date.
Error in canceling the subscriptions.	Subscription is not deleted.	There was some error in canceling the requested subscription. Server could be down.
Enter the passwords again.	Action for the subscription is not created.	User did not enter the same password twice for verification. Enter the information again.
Must fill in user profile.	Action for the subscription is not created	User did not enter the user profile information in the Action window.
Must fill in all the required fields.	Action for the subscription is not created.	User did not fill out all the required fields in the Action window. Re-enter the information.
Must choose a distribution method.	Action for the subscription is not created	User did not choose a distribution method for Action

Table A.2.5-1. ECS Subscription Service User Messages (3 of 3)

Message Text	Impact	Cause and Corrective Action
Couldn't get the Event ID.	Selection of an event from the browser failed.	User did not select an event from the event browser. Go to the browser and select an event for creating a subscription.
Must fill in operator and value fields to add.	Subscription does not have qualifiers.	User did not fill in operator and value to add to the qualifier list.
Couldn't select qualifiers.	Cannot build a qualifier list for the subscription.	User did not select a qualifier from the list. Select a qualifier from the provided list before adding operators to it.
Could not create a known subscription to delete.	Subscription is not deleted.	Selected subscription for deletion could not be created again. Server could be down or there could be a database problem.
Unable to get the event server ur.	Could not connect to the event server.	Event server could be down.
Unable to get the Subscription server ur.	Could not connect to the subscription server	Subscription server could be down.
Unable to connect to Subscription Server.	Cannot Initialize the GUI for start up.	Server is down.
Make sure you have logged into dce and the subscription server is running.	GUI cannot come up.	User either did not do a dce_login or the server is not up yet.

A.2.6 System Management Subsystem (MSS)

Tables A.2.6-1 through A.2.6.3 describe the user interface messages for ECS User Account Management, ECS Order Tracking, Trouble Ticket and ECS Assist.

Table A.2.6-1. ECS User Account Management User Messages (1 of 2)

Message Text	Impact	Cause and Corrective Action
Can Not Connect To The Server. Try again later.	None.	When: Retrieving request user. Action: Start up the User Profile Server
No data found in the database.	None.	When: Retrieving No register users for this particular HOME DAAC. Action: None.
The V0GW password, and Gate Way User Type can not be Empty.	None.	When: Creating a user profile Action: Add all fields required.
Create Register User Failed Please check log file for error.	None.	When creating user profile. Action: Check log file. Possible problems may come from Sybase or DCE failed.
Delete request user failed.	None.	When: Deleting request user. Action: check log file. Possible problems may come from Sybase.
Update Failed for Register User Please try again.	None.	When: Updating the request user. Action: Check log file. Possible problems may come from Sybase.
The First Name, Last Name, Telephone number and Email Address can not be Empty.	None.	When: Creating user profile. Action: Enter information in all fields required.
Insert has failed for Regist User, Please try again.	None.	When: Creating user profile. Action: Check log file. Possible problems may come from Sybase.
Delete failed for Register User Please try again.	None.	When: Deleting a request user. Action: Action: Check log file. Possible problems may come from Sybase.

Table A.2.6-1. ECS User Account Management User Messages (2 of 2)

Message Text	Impact	Cause and Corrective Action
Can Not Connect To The Server. Try again later.	None.	When: Retrieving user profile Action: Start up the User Profile Server.
No data found in the database.	None.	When: Retrieving user profile and no users for this particular HOME DAAC. Action: None.
Update Failed for profile database Please try again.	None.	When: Updating the user profile. Action: Check log file. Possible problems may come from Sybase.
V0 GateWay password is empty. The password is not updated.	None.	When: Updating V0 gateway password Action: Add V0 gateway password.
Change V0 GateWay password Failed. Please try again.	None.	When: Changing V0 Gateway password. Action: Check log file. Possible problems may come from Sybase.
Delete failed for profile database Please try again.	None.	When: Deleting a user profile. Action: Check log file. Possible problems may come from Sybase.
Update Failed for profile database. Please try again.	None.	When: Updating a user profile. Action: Check log file. Possible problems may come from Sybase.
No e-mail address.	None.	When: Changing Aster category or deleting DAR privilege. Action: Add e-mail address in the configuration file.

Table A.2.6-2. ECS Data Order Tracking User Messages

Message Text	Impact	Cause and Corrective Action
No requests found for the order.	None.	When: User retrieves the request with a specific order.
Unable to read from the Request Database. Try again later.	None.	When: Retrieving request. Cause: network, or Order server failed.
Unable to read from the Order Database. Try again later.	None.	When: Retrieving Orders. Cause: network, or Order server failed Action: Check log file to determine the reasons.
No orders were found.	None.	When: retrieving order with specific order ID
Please select a request first.	None.	When: Updating or deleting a request Action: Click on a request.
No orders match the request ID.	None.	When: Retrieving an order with a request ID.
The order is no longer in the database.	None.	When: Retrieving an order with an order ID.
Please select an order first.	None.	When: Deleting, updating, or viewing shipping information. Action: Click on an order.
Unable to read from the Request Database.	None.	When: Retrieving orders. Cause: network, or order server failed. Action: check log file to determine the reasons.
Please delete the corresponding requests first!	None.	When: Deleting an order. Cause: The order to be deleted has some requests associated with it. Action: Delete the requests first, and then delete the order.
Unable to delete order in the Order Database. Try again later.	None.	When: Deleting an order. Cause: network, or order server failed. Action: Check log file to determine the reasons.
Unable to delete request in the Order Database. Try again later.	None.	When: Deleting a request. Cause: network, or Order server failed. Action: Check log file to determine the reasons.
Server error, can not update order.	None.	When: Update an order. Cause: network, or order server failed. Action: Check log file to determine the reasons.

Table A.2.6-3. Trouble Ticket User Messages

Message Text	Impact	Cause and Corrective Action
Error- There has been an error in the Trouble Ticket service.	The user is prevented from logging a Trouble Ticket.	Check to see if the Remedy Server is running or not. If the Remedy Server is running, then check to see if the MsTtHTML.config file with the macro call RemedyServerHost is assigned with the appropriate hostname where Remedy Server resides.
There has been an error communicating with the Profile Server.	The user is prevented from logging a Trouble Ticket.	Check to see if the Accountability Server is running. If not running, bring up the Accountability server. Else, check the MsTtHTML.config file with the macro Site and Mode to see whether the correct assignment has been made to these macros related to the accountability server.
ERROR- There has been an error in locating filetype *.config = configuration. Call system admin in regard to FileType: MsTtHTML.config- Mode = SHARED	The user is prevented from logging a Trouble Ticket.	Make sure that the MsTtHTML.config file is installed in the path of /usr/ecs/SHARED/CUSTOM/cfg.
ERROR- There has been an error in locating filetype *.config = configuration Call system admin in regard to FileType: MsTtEnviro.config - Mode = SHARED.	The user is prevented from logging a Trouble Ticket.	Make sure the MsTtEnviro.config file is installed in the path of /usr/ecs/SHARED/CUSTOM/cfg.
Access denied. You can only access Trouble Ticket using a valid user id.	The user is prevented from logging a Trouble Ticket.	Use the Accountability User's Registration Tools (GUI) to create an account in to the Profile database.

Table A.2.6-4. ECS Assist Messages

Message Text	Impact	Cause and Corrective Action
No Clearcase component available for: Mode: XXXX Subsystem: YYYY	Preparation for installation does not proceed.	Caused by incorrect input provided during the preparation for installation of Subsystem YYYY in Mode XXXX

A.2.7 Planning Subsystem (PLS)

Tables A.2.7-1 through A.2.7-5 describe user interface messages for Resource Definition, Resource Scheduler, Planning Workbench, Production Request Editor, and Production Strategy.

Table A.2.7-1. Resource Definition User Messages (1 of 2)

Message Text	Impact	Cause and Corrective Action
Resource name required.	No name, no resource gets generated.	Enter a resource name.
A resource with this name already exists - re-enter name.	Name must be unique in the database.	Choose a different name.
Strings should be selected.	AutoSys requires, during creation, a string name to be associated.	Select and associate a String.
Resource is reserved - cannot modify.	The Resource Scheduler GUI reserves this resource.	Leave that resource alone. Another option: Use the Resource Scheduler to change the status or delete the reservation.
Unable to lock Resource tables - cannot modify resource.	The Processing software uses the resource or its member resource.	Decide not to modify this resource. Another option: Wait until the resource is released.
Number of cpus required.	This is a required field.	Enter a value.
Total ram required.	This is a required field.	Enter a value.
Operating system required.	This is a required field.	Enter the required information.
Number of cpus must be an integer number.	Non-numeric data are not valid.	Enter an integer.
Total ram must be an integer number.	Integer only	Enter an integer.
Error saving computer resource.	The operation failed because of an error in the database interface.	Check the database status.

Table A.2.7-1. Resource Definition User Messages (2 of 2)

Message Text	Impact	Cause and Corrective Action
Error saving computer resource comments.	Database interface error	Check the database status.
Error modifying computer resource.	DB Interface error	Check the database status.
Error modifying computer resource comments.	DB Interface error	Check the database status.
Unable to lock Resource tables - cannot delete resource.	The Processing software uses the resource or its member resource.	Do not delete this resource. Another option: Wait until the resource is released.
Partition Size required.	This is a required field.	Enter the required information.
Block Size required.	This is a required field.	Enter the required information.
Partition Size must be a number – reenter.	Integer only	Use an integer.
Block Size must be an integer number – reenter.	Integer only	Use an integer.
Activity Type is Not initialized.	Without this field initialized, the Save operation gets rejected.	Slay all the Resource Planning tasks, run the initialization sql script, and restart RP tasks.
Select a resource to modify from the list.	The selected resource should be one of the defined resources.	Select a list item.
Resources loaded.	The resources list has been loaded from the MSS baseline configuration.	N/A (informational message).
Resources not loaded - file not found.	The MSS baseline configuration file is not found in the previously designated directory.	Check with MSS about the location of the file.

Table A.2.7-2. Resource Scheduler User Messages (1 of 2)

Message Text	Impact	Cause and Corrective Action
This Name: < > with status: < > has been used, Please pick another Name.	The reservation name must be unique.	Choose a different name.
New Resvation can't leave resources list of ResvName: < > empty.	This required field must be filled.	Enter the name.
Can't insert new ResvName: < > into database.	The database cannot be updated.	Database error.
resvName: < > status is changed to < >.	Informational message.	N/A
resvName: < > can't replace new Interval List.	The database cannot be updated.	Use a unique name.
resvName: < > can't replace new Resource List.	The database cannot be updated.	Database error.
Success to update resvName: < >name.	Informational message.	N/A
Fail to modify resvName: < > .	The database cannot be updated.	Database error.
ResvName: < > Selected Intervals list can't be empty.	This required field must be filled.	Enter name.
ResvName: < > Selected Resources list can't be empty.	This required field must be filled.	Enter name.
ResvName: < > accepts new resources list.	Informational message.	N/A
ResvName: < > resource list is less now.	Informational message.	N/A
I can't find < Plan Name >.	There is a problem with the resource pool.	Enter valid name.
resvName: < > fails to approve - status is changed to < >.	The plan is not approved.	Conflict with another reservation. Rework.
resvName: < > myTime: < > resourceName: < > conflicted Time: < > conflictResvName: < >.	Informational message.	N/A
PIRpSiScheduler::modifyReservation - can't save new info for resvName: < >.	The database cannot be updated.	Database error.
can't send requestActChg to resource model for resvName: < >.	The database cannot be updated.	Database error.

Table A.2.7-2. Resource Scheduler User Messages (2 of 2)

Message Text	Impact	Cause and Corrective Action
ResvName: < > can't uncommitted < > RactAlls.	The database cannot be updated.	Database error.
Delete ResvName: < > from the list.	The database cannot be updated.	Select from the list.
ResvName: < > already has status < >.	Action cannot be completed.	Choose a different action.
Success to approve reservation Name: < >	Informational message.	N/A
ResvName: < > status is changed from approved to committed.	Informational message.	N/A
Error in creating a new object for row: < >.	The database cannot be updated.	Database error.
Open one Reservation at a time, Please.	Reservation cannot be opened.	Close one reservation before opening another.
A Reservation must be selected to modify.	User cannot proceed.	Select a reservation.
A Reservation must be selected to delete.	User cannot proceed.	Select a reservation.
Must select reservation.	User cannot proceed.	Select a reservation.

Table A.2.7-3. Planning Workbench User Messages

Message Text	Impact	Cause and Corrective Action
<p>You have already submitted the plan, <plan name> and this plan is currently active. Do you want to create a new plan?</p>	<p>If the operator has already submitted this plan for activation, PWB does not allow it to be submitted twice.</p>	<p>By answering "Yes" to dialog, PWB does create a new plan, which the operator can use for re-planning. Alternatively, the operator can use an already existing plan to activate and replan.</p>
<p>You cannot reschedule with the current active plan. Do you want to create new plan to schedule production request(s) and to reactivate the plan?</p>	<p>Cannot replan under the same plan name.</p>	<p>By answering "Yes" to dialog, PWB does create a new plan, which the operator can use for re-planning. Alternatively, the operator can use an already existing plan to activate and replan.</p>
<p>You need to save the current plan before you activate the plan!!!</p>	<p>Insures consistency between the database active plan and what actually gets activated.</p>	<p>Press "Yes" in the dialog and the plan is saved. Next time you try to activate, there is no error message.</p>
<p>The following dpr jobs were failed when you activated the plan <plan name> <list of failed dprs, one per line> Do you want to recover the failed dpr jobs?</p>	<p>PWB detects that Job Management has not received the dprs correctly. The operator needs to be aware there is (are) failed jobs.</p>	<p>Press "Recover" and the failed jobs are resubmitted.</p>

Table A.2.7-4. Production Request Editor User Messages (1 of 4)

Message Text	Impact	Cause and Corrective Action
Please specify production request to filter by.	Unable to filter Production Request Ids	Filter button acts on the pattern specified in the filter text entry area. Here, the user can filter all the production requests by the specified pattern.
Data Processing Request not open, Data Processing Request to be open must be selected.	Unable to open a DPR	Select a DPR from the DPR List first. Then open that DPR through the file menu.
Data Processing Request not open, Data Processing Request to be open must be selected.	Unable to open a DPR	Same as above.
Please select a Dpr you want to delete from the DPR List.	Unable to delete DPR(s)	Select a DPR from the DPR List first. Then delete the DPR through the Edit menu or using the keyboard Ctrl + D.
DPR Delete Failed.	Unable to delete DPR(s)	Look at the messages in EcPIPReDitor.ALOG file.
Do you want to delete this DPR "DPRID"?	Informational. User hit the delete button and the GUI is just confirming the action.	Yes, deletes the DPR. No, does not delete the DPR.
Production Request not saved, Production Request already exists.	Unable to save a PR.	Enter a new name for the production request and save the PR.
Production Request not saved, Production Request must have a name shorter than 20 characters before it is saved.	Unable to save a PR.	Enter a PR name with less than 20 Characters.
Production Request not saved, Production Request must have a name before it is saved.	Unable to save a PR.	Enter a new name for the production request and save the PR.

Table A.2.7-4. Production Request Editor User Messages (2 of 4)

Message Text	Impact	Cause and Corrective Action
Production Request not open, Production Request to be open must be selected.	Unable to save a PR.	Select a PR from the PR List first. Then, open the PR through the file menu or using the keyboard Ctrl + O.
Production Request not open, Production Request to be open must be selected.	Unable to save a PR.	Select a PR from the PR List first. Then, open the PR through the file menu or using the keyboard Ctrl + O.
Environment variable PL_NEW not set.	Unable to start Production Request Editor GUI.	Check the EcPIPREditor.CFG file for PI_NEW. If it is not specified, add this line PL_New = New.
Unable to Initialize PIProductionRequest Pool.	The database cannot be accessed	Unable to read the PR table from the database.
Unable to Initialize PIPge Pool.	The database cannot be accessed.	Unable to read the PGE table from the database.
Unable to Initialize PIDpr Pool.	The database cannot be accessed.	Unable to read the DPR table from the database.
Production Request not saved, save Production Request first.	Unable to open a PR.	Before opening a new PR save the modified PR first.
Please select a PR you want to delete from the PR List.	Unable to delete a PR(s).	Select a PR from the PR List first. Then, delete the PR through the Edit menu or using the keyboard Ctrl + D.
Please select a PR you want to delete from the PR List.	Unable to delete a PR(s).	Select a PR from the PR List first. Then, delete that PR through the Edit menu or using the keyboard CTRL + D.
Please select a PR you want to delete from the PR List.	Unable to delete a PR(s).	Select a PR from the PR List first. Then, delete that PR through the Edit menu or using the keyboard CTRL + D.
PR Failed - Need to include 1st orbit in the Orbit model.	Unable to explode DPR(s).	Make sure the 1 st orbit information is in the database table Orbit model.
PR Failed - Read failure from PIOrbitModel.	Unable to explode DPR(s).	Unable to read the Orbit Model table from the database.
PR Failed - Need to include 1st orbit in the Orbit model.	Unable to explode DPR(s).	Make sure the 1 st orbit information is in the database table Orbit model.
PR Failed - Read failure from PIOrbitModel.	Unable to explode DPR(s).	Unable to read the Orbit Model table from the database.

Table A.2.7-4. Production Request Editor User Messages (3 of 4)

Message Text	Impact	Cause and Corrective Action
Write to Database of Production Request Failed.		Unable to write the data to the database.
Production Request Explosion into DPRs Failed, zero DPRs Generated.	Unable to explode DPR(s).	Look at the messages in EcPIPReDitor .ALOG file
Zero DPR Generated. Production Request Not Saved.	Unable to explode DPR(s).	This can be a duplicate DPR. Also, look at the EcPIPReDitor .ALOG file
Production Request Explosion into DPRs ok. "NoOfDprs" DPR(s) Generated.	Informational message.	For information only. This display shows how many DPR(s) are generated as part of the PR Explosion.
SECURITY VIOLATION: no write permission.	The database cannot be updated.	User does not have the permission to save a production request.
Invalid Time is entered or End time is less than Begin Time.	Unable to explode DPR(s).	Check the duration time from the PR Edit screen and make sure the time entered here is a valid time.
Must select a PGE for Production Request before saving.	Unable to explode DPR(s).	Open the PGE screen by clicking the mouse on PGE.. push button of the PR Edit screen. Then select a PGE from the PGE list and click on OK.
Production Request Delete Failed.		Unable to delete a PR from the database. Look at the messages in EcPIPReDitor.ALOG file.
Production Request "PRNAME" Deleted; "NoOfDprs" DPR(s) deleted from the database.	Informational message.	For information only - to show how many DPRs are associated with that PR.
Production Request Explosion into DPR(s) Failed.	Unable to explode DPR(s).	Look at the messages in EcPIPReDitor.ALOG file.
Zero DPR Generated. Production Request Not Saved.	Unable to explode DPR(s).	Look at the messages in EcPIPReDitor.ALOG file.
Production Request Explosion into DPR(s) ok. "NoOfDprs" more DPR(s) Generated.	Informational message.	For information only - to show how many more DPRs are generated for that PR.

Table A.2.7-4. Production Request Editor User Messages (4 of 4)

Message Text	Impact	Cause and Corrective Action
Dpr Generation Incomplete for PR "PRNAME". Do you want to complete Dpr explosion?	Fail over recovery.	Yes, completes the DPR generation. No, displays another message showing how many DPRs are generated so far.
Do you want to delete this PR "PRNAME"?	Informational. User hit the delete button and the GUI is just confirming the action.	Yes, deletes the PR. No, does not delete the PR.
"NoOfDprs" Dpr(s) have previously been generated. Are you sure you want to delete this PR?	Fail over recovery.	Yes, deletes that PR. No, clears this message.

Table A.2.7-5. Production Strategy User Messages

Message Text	Impact	Cause and Corrective Action
Value out of range (0-10).	Unable to save the Production Strategy.	User must enter a value between 0 - 10.
Value out of range (0-100).	Unable to save the Production Strategy.	User must enter a value between 0 - 100.
Total Weight must be 100 - Normalize weights.	Unable to save the Production Strategy.	Click on the Normalize push button.
This StrategyID already exists.	Unable to save the Production Strategy.	Enter a new name for the Strategy ID.
Invalid StrategyID. Please enter a StrategyID.	Unable to save the Production Strategy.	User did not specify the Strategy ID. Enter a Strategy ID.
No StrategyID selected. Please select one.	Unable to open or delete a Strategy.	Select a Strategy ID from the List.

A.2.8 Data Processing Subsystem (DPS)

Tables A.2.8-1 through A.2.8-7 describe user interface messages for SSI&T Manager, SSAP Editor, PDPS/SSIT DB Update, Prohibited Function Checker, Process Control File Checker, Binary File Difference Assistant, and QA Monitor.

Table A.2.8-1. SSI&T Manager User Messages (1 of 3)

Message Text	Impact	Cause and Corrective Action
DPATMGR_F_SYSTEM_ERR	GUI Internal Error. Some kind of system error has occurred.	Restart the GUI. If that does not work, check LogStatus file in the logs directory.
DPATMGR_F_CANT_OPEN_FILE or "DPATMGR_E_CANT_OPEN_FILE or "DPATMGR_W_CANT_OPEN_FILE	File Access Error. GUI cannot access the file necessary to complete the requested action. Different versions of the error indicate criticality (F = Failure, E = Error, W = Warning)	Check to make sure the file exists. Most file locations are defined in the PCF for GUI (in data/DPS/DpAtMgrInternal.pcf) or in the configuration file (EcDpAtMgr.CFG).
DPATMGR_E_BAD_ENV_VAR	Environment Variable error. An environment variable used by the GUI is not set.	Check configuration file for the GUI (EcDpAtMgr.CFG) and make sure all environment variables have correct values.
"DPATMGR_E_CANT_FIND_PROGRAM"	File Access Error. GUI cannot find the program the user has chosen to run.	Check to make sure the program exists given the current user's path and the PCF (EcDpAtMgrInternal.pcf). If program cannot be found, adjust the user's path or the PCF appropriately.
"DPATMGR_E_CANT_FORK"	Called Program Error. Specified program cannot be started.	Check to make sure the chosen program exists and can be run from the command line.
"DPATMGR_E_BAD_EXIT"	Called Program Error. Specified program returned a bad exit status upon completion.	Error is with called program, not the GUI itself. Check to make sure the chosen program exists and the current version works appropriately.
"DPATMGR_E_PROGRAM_NOT_READY"	Called Program Error. Specified program cannot be executed.	Check to make sure the program exists given the current user's path and the PCF (EcDpAtMgrInternal.pcf). If program cannot be found, adjust the user's path or the PCF appropriately.
"DPATMGR_W_INVALID_FILENAME"	Data Error. The filename specified in the PCF was invalid.	Check to make sure the program is correctly specified in the PCF (EcDpAtMgrInternal.pcf).
Unable to open database	Database Access Error. The Database used for the SSIT checklist (a UNIX file) cannot be opened.	Check the *.dir and *.pag files in the data directory. If they do not exist then the database has been deleted. Restart the GUI to recreate them.

Table A.2.8-1. SSI&T Manager User Messages (2 of 3)

Message Text	Impact	Cause and Corrective Action
Unable to create database	Database Access Error. The Database used for the SSIT checklist (a UNIX file) cannot be created.	Check permissions on the data directory to make sure the GUI can write the *.dir and *.pag files that make up the database.
Error writing to database	Database Access Error. GUI failed to write to the Database used for the SSIT checklist (a UNIX file).	Check the *.dir and *.pag files in the data directory. If they do not exist or have been corrupted then the GUI is not able to write to them. Restart the GUI (and delete files if corrupted) to recreate them.
Error reading from database	Database Access Error. GUI failed to read from Database used for the SSIT checklist (a UNIX file).	Check the *.dir and *.pag files in the data directory. If they do not exist then the database has been deleted. Restart the GUI to recreate them.
Database currently not open	Database Access Error. GUI expected database to be open and it was not. This should never happen.	GUI internal error that should not occur.
Database currently open	Database Access Error. GUI expected database to be closed and it was open. This should never happen.	GUI internal problem that should not occur.
Database open for reading only	Database Access Warning. Database used for the SSIT checklist (a UNIX file) only has read permission for the current user.	Check permissions on the data directory and the *.dir and *.pag files to make sure the GUI can write to them.
Missing DATABASE= specification or Missing CHECKLIST= specification	Checklist File Error. The file that defines the SSIT Checklist has missing entries.	Check to make sure the file defining the checklist (in the data directory) has "DATABASE=" and "CHECKLIST=" entries.
Error Allocation Memory	Memory allocation error. GUI has run out of memory.	Restart GUI. Note that anything started from the Tools menu does NOT have to be restarted.
Unable to open. . . .	File Access Error. File defined in the PCF could not be opened.	Check to make sure the logical ID entry 603 is correctly specified in the PCF (EcDpAtMgrInternal.pcf).
Unable to get log/checklist database qualifier	File Access Error. File entry defining the SSIT Checklist was missing or incorrect in the PCF.	Check to make sure the logical ID entry 603 is correctly specified in the PCF (EcDpAtMgrInternal.pcf).
Specified Checklist does not match the one in the database.	File/Database mismatch. Checklist database and the <checklist>.database file are out of sync.	Either find the correct <checklist>.database file or remove *.pag and *.dir files and create a new database. Need to restart the GUI in either case.

Table A.2.8-1. SSI&T Manager User Messages (3 of 3)

Message Text	Impact	Cause and Corrective Action
Error while closing file	File Access Error. Could not close the file that defines the Run menu on the GUI.	Make sure the file has not been corrupted or removed. Restart the GUI.
"....returned from....."	Program Error. Program selected from menu returned an error upon completion.	Error with the specified program. Check into specified program operation.

Table A.2.8-2. SSAP Editor User Messages (1 of 5)

Message Text	Impact	Cause and Corrective Action
Cannot add new Assoc Collection.	Metadata Write Error. GUI could not write Associated Collection metadata to disk.	First check to make sure the Associated Collection was entered correctly. Correct any errors. If that does not fix the problem, check the LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.
Cannot create a new SSAP. Verify name is valid.	User Error. SSAP name has special characters within it that are not allowed because information is saved as a file.	Correct SSAP name not to have special characters.
Refresh failed.	Connectivity Error. SSAP Editor could not connect to Data Server to get the information needed to refresh the screen.	Check to make sure the Data Server is up and functioning normally. If Data Server is alive and well, restart the GUI and repeat the operation.
The current SSAP has been changed. Do you want to abort changes and work on another SSAP?	Informational. Current SSAP has changed and not been submitted to the Data Server and the user has selected a new or different SSAP.	Select Yes or No on the pop-up window.
Cannot select SSAP.	GUI internal error. The SSAP GUI has gotten out of sync with the Data Server.	Restart the GUI to synchronize the list of SSAPs with those kept at the Data Server.
Cannot open the Metadata information.	Connectivity Error. SSAP Editor could not retrieve the metadata information from the Data Server or the metadata retrieved is invalid.	Check to make sure the Data Server is up and functioning normally. If Data Server is alive and well, restart the GUI and repeat the operation.
Cannot get metadata list.	Connectivity Error. SSAP Editor could not retrieve the metadata information from the Data Server or the metadata retrieved is invalid.	Check to make sure the Data Server is up and functioning normally. If Data Server is alive and well, restart the GUI and repeat the operation.

Table A.2.8-2. SSAP Editor User Messages (2 of 5)

Message Text	Impact	Cause and Corrective Action
Do you want to reset the SSAP including File list and Metadata?	Informational. User hit the reset button and the GUI is just confirming that action.	Select Yes or No on the pop-up window.
Cannot reset File List.	File Access Error. GUI cannot find the backup file for the current File List.	Reset action cannot be performed. User must either keep the current changes (to the File List) or re-select the SSAP to cancel all changes.
Cannot reset Metadata List.	File Access Error. GUI cannot find the backup file for the metadata.	Reset action cannot be performed. User must either keep the current changes (to the metadata) or re-select the SSAP to cancel all changes.
Metadata has changed without saving. Please save or reset.	User Error. User changed the Metadata for the SSAP and did not save it before attempting to submit to the Data Server.	User Error. Either save SSAP Metadata or reset (to remove changes made) and submit the SSAP again.
The current SSAP has not changed.	User Error. GUI does not allow SSAP to be submitted to the Data Server if no changes have been made.	None. Only submit SSAP after changes have been made.
Cannot submit to the data server.	Connectivity Error. GUI could not save the SSAP to the Data Server.	Check to make sure the Data Server is up and functioning normally. If Data Server is alive and well, restart the GUI and repeat the operation (note that all changes are lost).
Submit to the data server successfully.	Informational. Submit to Data Server succeeded.	None.
Do you really want to delete the selected SSAP?	Informational. User has clicked on the Delete button and this is a confirmation message.	Select Yes or No on the pop-up window.
Cannot delete the selected SSAP.	Connectivity Error. GUI could not submit Deletion request to the Data Server.	Check to make sure the Data Server is up and functioning normally. If Data Server is alive and well, restart the GUI and repeat the operation.
Select a SSAP first.	User Error. User must first select an SSAP (on the Main tab) before choosing the desired function.	Select an SSAP on the Main Tab and then reselect the desired function.
Cannot Open the file list.	Disk Access error. GUI cannot find the File List on disk.	Submit current changes to the Data Server and restart the GUI.
Invalid path entered.	User Error. Path entered on File List tab does not exist on the local machine.	Enter correct path.

Table A.2.8-2. SSAP Editor User Messages (3 of 5)

Message Text	Impact	Cause and Corrective Action
Cannot go to the parent directory.	User Error. User attempted to go to the parent of the root directory.	None.
Cannot set the selected directory to the current path.	User Error. Path entered on File List tab does not exist on the local machine.	Enter correct path.
Do you really want to delete the selected file(s) from this SSAP?	Informational. User has clicked on the Delete button on the File List tab and this is a confirmation message.	Select Yes or No on the pop-up window.
Select a File Type first.	User Error. User did not select a File Type before trying to add to, extract from or delete from the SSAP.	Select the appropriate File Type and repeat the command.
Cannot Add the selected files to the current SSAP.	File Access error. The selected files cannot be found to add to the current SSAP.	Maybe sure the files still exist on the local disk.
No Items selected to delete	User Error. No files selected in the SSAP File List window before the delete button was pressed.	User Error. Select files to delete before pressing the delete button.
Name and Version must have non-null values.	User Error. User did not fill in a value for Name and/or version in the Associated Collections window.	User Error. Make sure both Name and Version are filled in before pressing the OK button on the Associated Collections window.
Cannot add new Assoc Collection.	Metadata Write Error. Associated Collection could not be added to the metadata.	First check to make sure the Name and Version were entered correctly on the Associated Collections window. Correct any errors. If the problem still exists, check the LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.
Duplicate Short Name/Version.	User Error. User entered a Short Name/Version pair that already exists in the Associated Collection.	User Error. Not action needed. Duplicate entry was NOT added to the Associated Collection list.
Cannot change SW date last modified.	User Error. Date in the SW Data Last Modified entry is invalid.	Correct the date in the SW Data Last Modified entry.
Failed changing SW date last modified.	Metadata Write Error. GUI could not write SW Date Last Modified metadata to disk.	First check to make sure the SW Data Last Modified was entered correctly. Correct any errors. If the problem still exists, check the LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.

Table A.2.8-2. SSAP Editor User Messages (4 of 5)

Message Text	Impact	Cause and Corrective Action
Cannot change Acceptance date	User Error. Date in the Acceptance Date entry is invalid.	Correct the date in the Acceptance Date entry.
Failed updating Acceptance date.	Metadata Write Error. GUI could not write Acceptance Date metadata to disk.	First check to make sure the Acceptance Date was entered correctly. Correct any errors. If the problem still exists, check the LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.
Cannot change PGE date last modified.	User Error. Date in the PGE Date Last Modified entry is invalid.	Correct the date in the PGE Date Last Modified entry.
Failed changing PGE date last modified.	Metadata Write Error. Could not write PGE Date Last Modified metadata to disk.	First check to make sure the PGE Data Last Modified was entered correctly. Correct any errors. If the problem still exists, check the LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.
Cannot set maturity Code. ...	Metadata Write Error. Could not write Maturity Code metadata to disk.	First check to make sure the Maturity Code was entered correctly. Correct any errors. If the problem still exists, check the LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.
Cannot Reset Metadata	File Access Error. GUI cannot find the backup file for the metadata.	Reset action cannot be performed. User must either keep the current changes (to the metadata) or re-select the SSAP to cancel all changes.
Cannot get Metadata information.	Connectivity Error. SSAP Editor could not retrieve the metadata information from the Data Server or the metadata retrieved is invalid.	Check to make sure the Data Server is up and functioning normally. If Data Server is alive and well, restart the GUI and repeat the operation.
Cannot save Metadata without Associate Collection	User Error. Need to set at least one Associate Collection before attempting to Save the metadata.	Create the appropriate Associated Collection and then Save the metadata.
Cannot save Metadata	Metadata Write Error. GUI could not write metadata to disk.	First check to make sure all visible metadata fields are correct. Correct any errors and Save again. Otherwise, check LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.

Table A.2.8-2. SSAP Editor User Messages (5 of 5)

Message Text	Impact	Cause and Corrective Action
Failed changing PGE Name.	Metadata Write Error. GUI could not write PGE Name metadata to disk.	First check to make sure the PGE Name was entered correctly. Correct any errors. If the problem still exists, check the LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.
Failed changing PGE id.	Metadata Write Error. GUI could not write PGE ID metadata to disk.	First check to make sure the PGE ID was entered correctly. Correct any errors. If the problem still exists, check the LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.
Failed changing PGE Function.	Metadata Write Error. GUI could not write PGE Function metadata to disk.	First check to make sure the PGE Function was entered correctly. Correct any errors. If the problem still exists, check LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.
Failed changing PGE Version.	Metadata Write Error. GUI could not write PGE Version metadata to disk.	First check to make sure the PGE Version was entered correctly. Correct any errors. If the problem still exists, check the LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.
Failed changing algorithm package Name.	Metadata Write Error. GUI could not write Algorithm Package Name metadata to disk.	First check to make sure the Algorithm Package Name was entered correctly. Correct any errors. If the problem still exists, check the LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.
Failed changing Description Type.	Metadata Write Error. GUI could not write Description Type metadata to disk.	First check to make sure the Description Type was entered correctly. Correct any errors. If the problem still exists, check the LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.
Incorrect value. Must be one of: Initial Delivery Early Delivery ENGRG MOD Operational Enhancement SW Patch	User Error. Value for the Delivery Purpose must be one of those specified.	Correct value and hit enter.
Failed changing Delivery Purpose.	Metadata Write Error. GUI could not write Delivery Purpose metadata to disk.	First check to make sure the Delivery Purpose was entered correctly. Correct any errors. If the problem still exists, check the LogStatus file in the logs directory for reason for the failure and take appropriate action to correct.

Table A.2.8-3. PDPS/SSIT DB Update User Messages (1 of 4)

Message Text	Impact	Cause and Corrective Action
Are you sure you want to overwrite data for the current selection	Warning message. Data is overwritten if the "Yes" button is clicked.	User must decide if he/she wants data overwritten and then click on the appropriate answer.
Unknown Exception in (location)	GUI error. GUI encountered an unexpected error. GUI is in a bad state.	Note down the location of the error (as it appears after "in") for debugging purposes. GUI must be restarted.
Memory Allocation Failure in (location)	GUI Error. GUI encountered an error allocating memory.	Note down the location of the error (as it appears after "in") for debugging purposes. GUI must be restarted to free up memory.
Unable to retrieve PGE versions from the database in (location)	Database error. GUI could not find versions for user selected PGE.	Database corruption, inconsistency or connectivity problem. GUI must be restarted to fix connection or inconsistency problem. If problem still occurs, the database must be checked for corrupted entries.
Need to select Name/Version pair before Display is allowed.	User Error. User did not select both a PGE Name and PGE Version.	User must select a PGE Name and Version pair to continue.
Unable to open the ODL file in (location)	Configuration Error. GUI cannot locate file to display ODL for PGE or ESDT definition.	Check GUI configuration file for correct location of PGE/ESDT SCIENCE METADATA FILES. Restart the GUI with corrected location.
Unable to display (File may not exist) in (location)	Configuration Error. GUI cannot locate file to display ODL for PGE or ESDT definition.	Check GUI configuration file for correct location of PGE/ESDT SCIENCE METADATA FILES. Restart the GUI with corrected location.
Need to select Name/Version pair before Delete is allowed.	User Error. User did not select both a PGE Name and PGE Version before clicking the Delete button.	User must select a PGE Name and Version pair and then click on the Delete button.
Need to select correct Profile ID before Delete is allowed.	User Error. User did not select a Profile ID before clicking the Delete button.	User must select a Profile ID and then click on the Delete button.
Are you sure you want to delete the listed PGEs with same SW id from the disk?	Warning message. PGEs are deleted if the "Yes" button is clicked.	User must decide if he/she wants PGEs deleted and then click on the appropriate answer.
Unable to obtain science software id from the database (can't delete) in (location)	Database error. GUI could not find science software id for PGE selected to delete.	Database corruption, inconsistency or connectivity problem. GUI must be restarted to fix connection or inconsistency problem. If problem still occurs, the database must be checked for corrupted entries.

Table A.2.8-3. PDPS/SSIT DB Update User Messages (2 of 4)

Message Text	Impact	Cause and Corrective Action
Need to select Name/Version pair before Edit is allowed.	User Error. User did not select both a PGE Name and PGE Version before clicking the Edit button.	User must select a PGE Name and Version pair and then click on the Edit button.
Need to select correct Profile ID before Edit is allowed.	User Error. User did not select a Profile ID before clicking the Edit button.	User must select a Profile ID and click on the Edit button.
Unable to obtain user parameters from the database in (location)	Warning message. No User Parameters were found in the database.	No action unless User Parameters were expected. Then restart the GUI to fix database connection or inconsistency problem.
There are no user parameters for this pge	Warning message. No User Parameters were found in the database.	No action unless User Parameters were expected. Then restart the GUI to fix database connection or inconsistency problem.
There are no ESDT for this pge	Warning message. No ESDTs were found in the database.	No action unless ESDTs were expected. Then restart the GUI to fix database connection or inconsistency problem.
Unable to obtain Resource requirements from the database in (location)	Database error. GUI could not find Resource Requirements for selected PGE.	Database corruption, inconsistency or connectivity problem. GUI must be restarted to fix connection or inconsistency problem. If problem still occurs, the database must be checked for corrupted entries.
Unable to obtain performance data from the database in (location)	Database error. GUI could not find Performance Data for selected PGE.	Database corruption, inconsistency or connectivity problem. GUI must be restarted to fix connection or inconsistency problem. If problem still occurs, the database must be checked for corrupted entries.
This value would cause overflow or underflow	User Error. User entered a value that is too large or too small.	User must enter a value within the accepted range.
Maximum integer value exceeded in (location)	User Error. User entered an Integer value that is too large.	User must enter a value within the accepted range.
Resource Manager construction FAILED!	GUI Error. GUI encountered an error allocating memory (for the Resource Manager).	Note down the location of the error (as it appears after "in") for debugging purposes. GUI must be restarted to free up memory.
Unable to retrieve processing strings from the Database	User Error. Resource Planning information is not in the current database.	Need to run Resource Planning for the current database and restart the GUI.
Unable to retrieve computer strings from the Database	User Error. Resource Planning information is not in the current database.	Need to run Resource Planning for the current database and restart the GUI.

Table A.2.8-3. PDPS/SSIT DB Update User Messages (3 of 4)

Message Text	Impact	Cause and Corrective Action
There are no processing strings in the Database	User Error. Resource Planning information is not in the current database.	Need to run Resource Planning for the current database and restart the GUI.
There are no computer names in the Database	User Error. Resource Planning information is not in the current database.	Need to run Resource Planning for the current database and restart the GUI.
Processing String or the computer name is not in the list of Valid's, found in (location)	Database Error. Processing String or Computer Name Valid's have changed while the GUI was operating.	Database inconsistency problem. GUI must be restarted to fix inconsistency problem.
Maximum floating point value exceeded in (location)	User Error. User entered a floating-point value that is too large.	User must enter a value within the accepted range.
Unable to create the User Parameter Collection class: Aborting update in (location)	Database error. GUI could not save User Parameter data to the database.	Database corruption, inconsistency or connectivity problem. GUI must be restarted to fix connection or inconsistency problem. If problem still occurs, the database must be checked for corrupted entries.
Unable to create resource requirements class: Aborting update in (location)	Database error. GUI could not save Resource Requirement data to the database.	Database corruption, inconsistency or connectivity problem. GUI must be restarted to fix connection or inconsistency problem. If problem still occurs, the database must be checked for corrupted entries.
Failure connecting to the database in (location)	Database error. GUI could not connect to the database.	Database connectivity problem. GUI must be restarted to fix connection. If problem still occurs, Sybase support may be needed.
Cannot select Computer from database in (location)	Database error. GUI cannot find computer in database.	Database corruption, inconsistency or connectivity problem. GUI must be restarted to fix connection or inconsistency problem. If problem still occurs, the database must be checked for corrupted entries.
Cannot get StringName from database in (location)	Database error. GUI cannot find string in database.	Database corruption, inconsistency or connectivity problem. GUI must be restarted to fix connection or inconsistency problem. If problem still occurs, the database must be checked for corrupted entries.
Unable to create PIPerformance class: Aborting update in (location)	Database error. GUI cannot save data to database.	Database corruption, inconsistency or connectivity problem. GUI must be restarted to fix connection or inconsistency problem. If problem still occurs, the database must be checked for corrupted entries.

Table A.2.8-3. PDPS/SSIT DB Update User Messages (4 of 4)

Message Text	Impact	Cause and Corrective Action
Unable to update the database in (location)	Database error. GUI cannot save data to database.	Database corruption, inconsistency or connectivity problem. GUI must be restarted to fix connection or inconsistency problem. If problem still occurs, the database must be checked for corrupted entries.
PGE has now changed from New to Existing	Informational. PGE has now been marked as "existing" in the database and can be scheduled.	No action needs to be taken. After all info for a PGE has been saved by the GUI and the PGE is marked as "existing" and can be scheduled.
Could not get PGEs from the Database in (location)	Database error. GUI cannot retrieve PGEs from the database.	Database corruption, inconsistency or connectivity problem. GUI must be restarted to fix connection or inconsistency problem. If problem still occurs, the database must be checked for corrupted entries.
There are no PGEs in the database Found in (location)	Database error. GUI cannot retrieve PGEs from the database.	Database corruption, inconsistency or connectivity problem. GUI must be restarted to fix connection or inconsistency problem. If problem still occurs, the database must be checked for corrupted entries.
There are no Existing PGEs	Warning message. No Existing PGEs were found in the database when the user selected "Existing" from "New"	No action required.
Unable to retrieve new pges from the database Found in (location)	Warning message. No New PGEs were found in the database (the tool defaults to this PGE state).	No action required.
There are no More New PGEs	Warning message. No New PGEs were found in the database (the tool defaults to this PGE state).	No action required.

Table A.2.8-4. Prohibited Function Checker Messages

Message Text	Impact	Cause and Corrective Action
An Item must be selected from the list for viewing	User Error. User must select an item before clicking the View button.	Select the item desired and click the View button.
No files selected	User Error. User did not select one of more files to check.	Select one of more files and re-select the command.
No reference to prohibited functions list file could be found in the process control file	Process Control File (PCF) error. PCF has missing/corrupted entries.	Check that the PCF (DpAtMgrInternal.pcf) has appropriate entries for prohibited functions.
Error accessing the Process Control File. Check that the environment variable PGS_PC_INFO_FILE is defined and that its value is the location of a valid Process Control File.	PCF error. Configuration file for the prohibited function checker is pointing to an invalid PCF.	Check the EcDpAtBadFuncGui.CFG file for the setting of PGS_PC_INFO_FILE and make sure it is pointing to a valid PCF.
Unable to open the prohibited functions list file defined in the Process Control File.	PCF error. Process Control File has a bad location for the prohibited functions list for the specified file type.	Check PCF (DpAtMgrInternal.pcf) for definition of prohibited functions list and make sure it exists and is valid.
Encountered unexpected error. . . .	GUI internal error. An unknown error occurred.	Check LogStatus file in the logs directory for possible debugging information.
Invalid file name	User Error. The filename specified for the report is invalid.	Correct the report filename (remove any special characters, make sure location exists) and try the command again.
Invalid directory specification	User Error. The directory specified does not exist.	Correct the directory name and try the command again.

Table A.2.8-5. SSAP Process Control File Checker User Messages

Message Text	Impact	Cause and Corrective Action
An error was encountered while getting default directory name to display on file selector. Your current directory is displayed instead. Check setting of environment variable PGS_PC_INFO_FILE and rerun program to display default directory	PCF error. Configuration file for the PCF checker is pointing to an invalid PCF.	Check the EcDpAtCheckPCF.CFG file for the setting of PGS_PC_INFO_FILE and make sure it is pointing to a valid PCF.
Cannot open selected PCF	File Access Error. Selected PCF either does not exist or is not readable.	Check to see if the PCF exists and is readable. Restart the GUI.
\$PGSHOME not set or \$PGSHOME is not a valid directory	Configuration File error. Configuration file for the PCF checker has not set PGSHOME correctly.	Check the EcDpAtCheckPCF.CFG file for the setting of PGSHOME. Fix it and restart the GUI.
Error while getting temporary output file name	PCF error. PCF does not have correct entry for temporary files.	Correct setting in PCF (DpAtMgrInternal.pcf) under temporary files section.
Invalid file name	User Error. Specified filename is invalid.	Correct the filename (removing any special characters, making sure the directory exists) and try the command again.
Printing to default printer	Informational. Tool always prints to the default printer.	If printer is incorrect, change the default printer in your environment and select print again.
Can't save to	User Error. Specified file to save to cannot be written to.	Check to make sure the user has permission to write to the file.
Save of file. . . .complete	Informational. File save has completed successfully.	None.
Can not open temporary output file containing PCF checker results	File Access Error. Temporary file cannot be found or opened.	Check to make sure the temporary file has not been deleted or moved. Its location is specified in the PCF (DpAtMgrInternal.pcf).
Could not allocate enough space to display file containing PCF checker results. Free some space and retry	Memory error. GUI has run out of memory.	Restart the GUI.
Read error while attempting to read the contents of PCF checker results file into buffer for display	File Access Error. Temporary file cannot be read.	Temporary output file is corrupted. Delete the file (its location is specified in the PCF) and try the check again.

Table A.2.8-6. Binary File Difference Assistant User Messages

Message Text	Impact	Cause and Corrective Action
Copy operation - successful	Informational. File copy succeeded.	None.
Copy operation - unsuccessful	File copy failure. The copying of the specified file failed.	Check permissions in the target directory and make sure the space is available on the machine.
Text must be entered into the text field	User Error. Text field may not be blank.	Fill in text field.
Unable to open file	File Access Error. Specified file could not be found or opened.	Check to make sure the file exists and is readable. Retry the command.
File is empty	File Access Error. Specified file contains no data.	Check to make sure the file has not been corrupted or copied over. Get corrected file and retry the command.
Unable to allocate memory	Memory allocation error. GUI could not allocate needed memory.	Restart the GUI.
Did not read entire file	File Access Error. GUI could not parse the entire contents of the specified file.	File is probably corrupted. Find uncorrupted version of the file and retry the command.

Table A.2.8-7. QA Monitor User Messages

Message Text	Impact	Cause and Corrective Action
Call to EcPfClient constructor failed.	The query, retrieve, and update cannot be performed. However, the visualization of data can proceed.	EcPfClient may not find the Config file. Make sure the Config file exists. Exit GUI and try again later.
Call to DpPrQaMonitor constructor failed.	The query, retrieve, and update cannot be performed. However, the visualization of data can proceed.	DpPrQaMonitor cannot read the parameters in the Config file. Exit GUI and try again later.
Unable to initialize PIDataType pool.	The query, retrieve, and update cannot be performed. However, the visualization of data can proceed.	Cannot connect to the database. Make sure the PDPS database is up and running, exit GUI and try again later.
Failed due to < > errors while constructing DpPrQaMonitor object	The query, retrieve, and update cannot be performed. However, the visualization of data can proceed.	Run-time system error. Can exit GUI and try again later.
Failed due to unexpected runtime errors while constructing DpPrQaMonitor object	The query, retrieve, and update cannot be performed. However, the visualization of data can proceed.	Run-time system error. Can exit GUI and try again later.
...No data granule is selected.	Cannot retrieve the data granule.	Select 1 or more data granules.
...Retrieving data granules failed...	Somehow retrieving data granule(s) failed.	Cannot connect to the Data Server. Try it again later.
...Querying Data failed	Some how the querying data granules failed	Cannot connect to the Data Server. Try it again later.
Date Interval is invalid. Please enter a valid date.	The querying cannot be performed.	Make sure the end date is greater than the start date and the dates have to be between Jan. 2, 1901 and June 1, 2036.
...UpdateMetaData failed	The updating of metadata cannot be performed	Cannot connect to the Data Server. Try it again later.
... Visualizing Data failed	The visualizing of data cannot be performed	Cannot invoke EOSView. Try it again later.
Failed due to < > while constructing EcPfClient or EcUtCIHelp.	The query, retrieve, and update cannot be performed. However, the visualization of data can proceed. Also the help would not be available	System unexpected run-time error.

A.2.9 Order Manager Subsystem (OMS)

The following table (Table A.2.9-1) presents user interface messages generated by the Order Manager Maintenance GUI associated with the OMS.

Table A.2.9-1. Order Manager Maintenance GUI User Messages (1 of 7)

Message Text	Impact	Cause and Corrective Action
Please hit your browser's Back button and select a disposition.	Intervention cannot be resolved.	The operator did not select a disposition from the previous page (Intervention Detail page – the operator must select one of “submit”, “fail”, “Keep on hold”, or “partition”). Go to the previous page and select a disposition.
All of the granules for this request have been failed. You can not submit or partition the request because the submission will fail and another operator intervention will be created for it. This request should be failed. Return to the previous page and select "Fail Request" under the Request Disposition section.	Intervention cannot be resolved.	The operator failed <i>all</i> the granules for a particular request and tried to submit or partition it. Since there are no granules, there is nothing to submit or partition. The operator should go back to the detail page and fail the entire request.
Please hit your browser's Back button and enter a valid name into the "worked by" field and click on "Override Current Worker	Intervention cannot be resolved.	The operator did not enter a name into the “worked by” field on the Intervention Detail page. If the operator wishes to take <i>any</i> action on the intervention, a name <i>must</i> be entered.
You have selected a new media type, but not did indicate you actually wanted the media changed. Hit your browser's Back button to correct this.	Intervention cannot be resolved.	The operator changed the media type for the request on the Intervention Detail page but forgot to check the box labeled “Change media to...”. This redundancy is necessary to make absolutely sure the operator wants to indeed change the media type. The operator should go back to the previous page and check the “Change media to...” box or reset the media type in the drop-down list to “—” (indicating no change).

Table A.2.9-1. Order Manager Maintenance GUI User Messages (2 of 7)

Message Text	Impact	Cause and Corrective Action
<p>You have indicated you want to change the media, but did not select the media type. Hit your browser's Back button to correct this.</p>	<p>Intervention cannot be resolved.</p>	<p>Similar to the error above, the operator checked the box labeled "Change media to..." but did not select a different media type from the drop-down list. The operator should go back to the previous page and select the new media type or uncheck the "Change media to..." box (the drop-down list must also be set to "—").</p>
<p>You have entered partitioning days/hours, but have not indicated that you want to spread the request over this time period! (you probably forgot to check the AND box). Hit your browser's Back button to correct this.</p>	<p>Intervention cannot be resolved.</p>	<p>This error message is pretty self-explanatory. The operator probably intended to partition the request but forgot to check the "and" box. Again, this redundancy ensures the correct action is taken.</p>
<p>The e-mail text box is empty - it should contain a message to the user if you want e-mail sent out. <i>(Appears as JavaScript dialog box)</i></p>	<p>Intervention resolution cannot be submitted.</p>	<p>This message appears if there is an e-mail text box in the Close Confirmation page and the operator did not enter any message text. The operator should enter some text and resubmit the form.</p>
<p>You can not update the FTP Push parameters for this request because the media type is <old media>. Please hit your browser's Back button and correct this.</p>	<p>Intervention cannot be resolved.</p>	<p>This message appears if the operator inadvertently checked the "Update FTP Push parameters" box, even though the media type for that request is not FTP Push. The operator should go back and uncheck this box. <i>This error message should be quite rare, as the "Update FTP Push parameters" box normally does not appear if the media type is not FTP Push.</i></p>
<p>You can not change the FTP Push parameters and change the media type at the same time. Please hit your browser's Back button and correct this.</p>	<p>Intervention cannot be resolved.</p>	<p>This message appears if the media type for the request is FTP Push. The operator probably elected to change the media type and checked the "Update FTP Push parameters" box at the same time. The operator should go back to the previous page and uncheck this box.</p>

Table A.2.9-1. Order Manager Maintenance GUI User Messages (3 of 7)

Message Text	Impact	Cause and Corrective Action
An undefined error occurred executing the stored procedure.	Various.	This error message does not appear because of an operator error. This is an internal error due to a bad database connection, incorrect stored procedure arguments, or a system fault. The operator can chose to resubmit the changes for the Intervention (essentially retrying the database connection). If it still does not work, this error should be reported to a system administrator or other authority. <i>Again, this message should be quite rare, as there are no normal conditions that would lead to this error.</i>
Error: Not that many rows or invalid row number. (Appears as JavaScript dialog box)	The Operator is unable to navigate through rows (on various pages).	The operator entered an invalid row number in the navigation box at the top of a listing. This error can appear on any page with this feature. The operator should enter a row number within the range of rows displayed in the GUI screen.
Error: <VALUE> is an invalid number for this parameter." (Appears as JavaScript dialog box)	A parameter value does not get modified.	This can appear on the Media or Server Configuration page. The operator probably tried to change a parameter value (which requires a number) to a value containing non-numeric characters. This error can also appear if the number is outside a valid range for that field or the value contains a decimal point when the value should be an integer.
INPUT ERROR: There was a problem with the input parameter for ECS Order. Please contact your system's administrator to fix this problem.	Information about an ECS Order does not get displayed.	This rare error message only appears if the ecs_order parameter (usually embedded in the URL) were empty. This would probably occur if the page were accessed directly (i.e., the operator did not arrive at that page via a link). If the operator <i>did</i> arrive at that page by a link, this could indicate a serious database error or a problem with the Perl code, since the ECS Order ID was not passed to that page.

Table A.2.9-1. Order Manager Maintenance GUI User Messages (4 of 7)

Message Text	Impact	Cause and Corrective Action
An error message was not available. Please contact the system administrator for further assistance.	Various.	This message only appears on the Error Page (EcOmGuiError.pl). It only appears if there were a problem with the Perl code or a stored procedure did not give a specific reason as to why it failed. There is no corrective action the operator can take in this case.
An error has occurred with the page you are requesting (<i>followed by a specific error message</i>).	Various.	This message only appears on the Error Page (EcOmGuiError.pl). The operator is redirected to this page in the case of stored procedure or system faults. The operator can retry whichever action was previously attempted, but in most cases, the error is a fatal one (e.g., a binary was installed incorrectly or is missing).
ERROR: You must assign a worker to this intervention before proceeding. <i>(Appears as JavaScript dialog box)</i>	Actions cannot be taken on an intervention.	This message appears on the Open Intervention Detail Page (EcOmGuiOpenIntervDetail.pl). It is displayed if the operator attempted to take an action on an open intervention before assigning a name in the “Worked By” text box (a worker name is not required to only <i>view</i> the intervention). The operator should enter his/her name into the “Worked By” text box and hit the “Assign New Worker” button.
ERROR: You can not modify request-level attributes and place the intervention on hold. <i>(Appears as JavaScript dialog box)</i>	Intervention cannot be resolved.	This message appears on the Open Intervention Detail Page (EcOmGuiOpenIntervDetail.pl). It is displayed if the operator attempted to modify request-level attributes (change the media type, update FTP Push parameters, disable limit checking) and then tried to place the intervention on hold. The operator should either submit or partition the request in this case. If this is not a desirable action, the operator should hit the “reset” button and then place the Intervention on hold.

Table A.2.9-1. Order Manager Maintenance GUI User Messages (5 of 7)

Message Text	Impact	Cause and Corrective Action
<p>ERROR: You can not modify request-level attributes if you are failing the request. (Appears as JavaScript dialog box)</p>	<p>Intervention cannot be resolved.</p>	<p>This message appears on the Open Intervention Detail Page (EcOmGuiOpenIntervDetail.pl). It is displayed if the operator attempted to modify request-level attributes (change the media type, update FTP Push parameters, disable limit checking) and then tried to fail the entire request. If the operator wishes to fail a request, he/she should deselect any request-level attribute changes. The request can then be failed, if so desired.</p>
<p>ERROR: You can not change the media type from <MEDIA> to <MEDIA> - the media types are the same. (Appears as JavaScript dialog box)</p>	<p>Intervention cannot be resolved.</p>	<p>This message appears on the Open Intervention Detail Page (EcOmGuiOpenIntervDetail.pl). This message appears if the operator tried to change the media type to whatever it already is. If the operator does not wish the media type to be changed, the drop-down list should be set to "--".</p>
<p>ERROR: You can not change the media type and update the FTP Push parameters. (Appears as JavaScript dialog box)</p>	<p>Intervention cannot be resolved.</p>	<p>This message appears on the Open Intervention Detail Page (EcOmGuiOpenIntervDetail.pl). This message appears probably due to the operator inadvertently checking the "Update FTP Push parameters" box. The box should be un-checked or the media type should be changed the proper way.</p>
<p>ERROR: Partition days must be an integer. (Appears as JavaScript dialog box)</p>	<p>Intervention cannot be resolved.</p>	<p>This message appears on the Open Intervention Detail Page (EcOmGuiOpenIntervDetail.pl). This message appears if the operator was partitioning the request and enters a fractional number (or some garbage characters) in the "days" field. The operator should enter the number of days as a whole number only.</p>
<p>ERROR: Partition hours must be an integer. (Appears as JavaScript dialog box)</p>	<p>Intervention cannot be resolved.</p>	<p>This message appears on the Open Intervention Detail Page (EcOmGuiOpenIntervDetail.pl). This message appears if the operator was partitioning the request and enters a fractional number (or some garbage characters) in the "hours" field. The operator should enter the number of hours as a whole number only.</p>

Table A.2.9-1. Order Manager Maintenance GUI User Messages (6 of 7)

Message Text	Impact	Cause and Corrective Action
<p>!!! ERROR: It appears that all granules have been failed. You can not submit or partition a request with all FAILED granules. This request should be failed. To do this, Select "Fail Request" from the Request Disposition section and try again.</p> <p>(Appears as JavaScript dialog box)</p>	<p>Intervention cannot be resolved.</p>	<p>This message appears on the Open Intervention Detail Page (EcOmGuiOpenIntervDetail.pl). This error message is pretty self-explanatory. If <i>all</i> the granules in a request have been failed, the request can no longer be submitted or partitioned. The only corrective action is to fail the entire request or place it on hold.</p>
<p>ERROR: Invalid name entered into Worked by field. You must enter a name into this field before proceeding.</p> <p>(Appears as JavaScript dialog box)</p>	<p>Actions cannot be taken on an intervention.</p>	<p>This message appears on the Open Intervention Detail Page (EcOmGuiOpenIntervDetail.pl). This message appears if the operator attempted to enter non-alphanumeric characters, nothing, or just white space into the "Worked By" field. The operator should enter a real name or a user ID into the field. Numbers and spaces are allowed.</p>
<p>ERROR: You must enter a name into the Worked by field before proceeding.</p> <p>(Appears as JavaScript dialog box)</p>	<p>Actions cannot be taken on an intervention.</p>	<p>This message appears on the Open Intervention Detail Page (EcOmGuiOpenIntervDetail.pl). It is displayed if the operator attempted to take an action on an open intervention before assigning a name in the "Worked By" text box (a worker name is not required to only <i>view</i> the intervention). The operator should enter his/her name into the "Worked By" text box and hit the "Assign New Worker" button.</p>
<p>INPUT ERROR: There was a problem with the input parameter for a User Profile. Please contact your system's administrator to fix this problem.</p>	<p>Information about a User profile is not displayed.</p>	<p>This rare error message only appears if the UserId parameter (usually embedded in the URL) was empty. This probably occurs if the page were accessed directly (i.e., the operator did not arrive at that page via a link). If the operator <i>did</i> arrive at that page by a link, this could indicate a serious database error or a problem with the Perl code, since the User ID associated with that order was not passed to the page.</p>

Table A.2.9-1. Order Manager Maintenance GUI User Messages (7 of 7)

Message Text	Impact	Cause and Corrective Action
<p>Error executing SweeperStart: <message></p> <p>or</p> <p>Sweeper error: <message></p>	<p>Server Statistics or Queue Status page does not display correct information, or the affected pages do not display at all.</p>	<p>This message appears on the Error Page (it could also appear on the Queue Status or OM Server Statistics page). <i>SweeperStart</i> is a shell script that runs the Sweeper binary, which tells the system if certain servers are up and running. If either the shell script or the binary <i>Sweeper</i> was corrupt, missing, not executable, or had the wrong permissions, this message is displayed. From an operator standpoint, there is no corrective action to take. The system administrator must re-install the Order Manager GUI or manually copy the binary or the shell script to its proper location and give it the proper permissions.</p>
<p>ERROR: Can't open session file: <message></p>	<p>Requested page does not display.</p>	<p>This error message can occur on any page. The session file is like a cookie – it can expire or become corrupt. The operator has to reload the GUI by starting it from a bookmark or manually typing the base URL (<i>without</i> a session ID). For this reason, bookmarks should not be saved for specific Order Manager GUI pages. If a session is more than 5 days old, and the GUI has not been restarted in that amount of time, this error does occur.</p>
<p>ERROR: A database error was encountered: deadlock could not be resolved after <NUMBER> tries</p>	<p>An action requiring a call to a stored procedure or access to a database table is not taken.</p>	<p>Although rare, this message appears on the Error Page after a stored procedure could not be executed due to a database (or table) deadlock. The command is retried a number of times (depending on the DEADLOCK_RETRIES parameter in the configuration file) before this message is displayed. The operator can chose to wait a while and retry the previous operation, or he/she can contact the system administrator to determine if the OMS or MSS database has a heavy load or is otherwise corrupt in some way. If the problem cannot be quickly resolved, there might be a performance issue, or the stored procedure can contain an error.</p>

A.2.10 Spatial Subscription Server Subsystem (SSS)

The following table (A.2.10-1) presents user interface messages generated by the Spatial Subscription Server (SSS) GUI associated with the SSS subsystem.

Table A.2.10-1. Spatial Subscription Server GUI User Messages (1 of 2)

Message Text	Impact	Cause and Corrective Action
No subscription choice was selected, click on View, Update, or Delete.	No action taken on the subscription.	The user clicked 'Apply' for a subscription without specifying an action (view, update or delete). Return to previous page and select an action.
User Profile Validation Failure. User "" is unknown.	Subscription not added/updated.	The user attempted to add/update a subscription without specifying a userId. Return to previous page and enter a valid userId.
Datetime String Validation Failure	Subscription not added/updated.	The user entered an invalid datetime string. Return to previous page and enter a valid datetime string.
ESDT Pattern Error	Subscription not added.	The user entered an invalid pattern for an ESDT short name. Return to previous page and enter a valid pattern (or leave blank to see all possible ESDTs).
Subscription NOT added. The following input errors were detected: <description of the error>	Subscription not added/updated.	Invalid data was entered for a subscription and detected by Sybase when an insert into the database was attempted. (For example, alpha data entered for a numeric field). Return to previous page and correct the data entry described in the detailed error message.
No actions were entered for the subscription.	Subscription not added/updated.	A subscription must have at least one associated action. Return to previous page and select at least one action by checking the checkbox for that action and entering the required data.
Cannot mix bundling with other types of actions	Subscription not added/updated.	If a subscription is bundled, it cannot have any other associated actions. Return to previous page and either unbundle the subscription or uncheck any other checked actions.
All the mandatory acquire data for FtpPush (Pull) was not entered	Subscription not added/updated.	Required information was not entered for an acquire action (e.g., FTP password for a push operation). Return to previous page and enter all requested information.

Table A.2.10-1. Spatial Subscription Server GUI User Messages (2 of 2)

Message Text	Impact	Cause and Corrective Action
All the mandatory E-Mail Notification data was not entered	Subscription not added/updated.	Required information was not entered for an email notification action. Return to previous page and enter all requested information.
All the mandatory Data Pool data was not entered	Subscription not added/updated.	Required information was not entered for a data pool action. Return to previous page and enter all requested information.
No option was selected, click on Suspend All, Resume All or Cancel All	No action taken on subscriptions.	No action was specified to apply to the subscriptions associated with a theme. Return to the previous page and select an option.
"userId" must have a value	Bundling order not added/updated.	UserId was not specified for a bundling order. Return to the previous page and enter a valid userId.
User Profile Validation Failure: User <> is Unknown.	Bundling order not added/updated.	An invalid userId has been specified for a bundling order. Return to the previous page and enter a valid userId.
Date format invalid. Please enter MM/DD/YYYY.	Bundling order not added/updated.	An invalid datetime has been entered for the bundling order expiration date. Return to the previous page and enter a valid datetime string.
<> must have a value	Bundling order not added/updated.	A required field has not been entered for a bundling order. (For example, street address for a physical media distribution.) Return to the previous page and enter the required information.
<> must be an integer	Bundling order not added/updated or completion criteria defaults not configured.	A non-numeric value was entered for one or more completion criteria. Return to the previous page and enter only numeric values for completion criteria.

A.2.11 Data Pool Subsystem (DPL)

The following table (Table A.2.11-1) presents user interface messages generated by the Data Pool Maintenance GUI associated with the DPL subsystem.

Table A.2.11-1. Data Pool Maintenance GUI User Messages (1 of 2)

Message Text	Impact	Cause and Corrective Action
DB Error: You entered a duplicate collection group name that exists in the database. Please try again	Unable to add a new group id	Duplicate group name is entered. Check the list of group ids and enter a group name consisting of four letters, which is not on the list.
INPUT Error: You entered an invalid group name. Please see help page for more information. Please see section Add Collection Group	Unable to add a new group	Lower case letter is entered. Group id should be all Upper case letters.
INPUT Error: You entered an invalid name. Please see log for more details. Consult help tab and see section for NON-ECS add Collection Screen	Unable to add a new non-ECS collection	Special characters/small letters are entered. Non-ECS collection name should be in capital letters and without any special characters.
INPUT Error: You entered an invalid theme name. Please see help page for more information. Please see section: Add New Theme	Unable to add a new theme	Special characters/small letters are entered. Theme names should be in capital letters and without any special characters.
DB Error: Theme can not be null or empty	Unable to add a theme	A null or empty string is entered. Theme name should contain capital, small letters. Space is also allowed but no special characters.
DB Error: You entered either an existing theme name or a collection or a group name or an ESDT name. Check the log at /usr/ecs/<mode>/CUSTOM/log/EcDIDpmDataPoolGui.log for more details	Unable to add a theme	A name is entered, which is a duplicate name for a group, collection or an ESDT name.

Table A.2.11-1. Data Pool Maintenance GUI User Messages (2 of 2)

Message Text	Impact	Cause and Corrective Action
DB Error: This collection is allowed for insertion therefore Spatial Search Type cannot be modified for this collection	Unable to modify Spatial Search type for a collection	Collection is not allowed for insertion. First make the collection allowed for insertion and then try to modify search type
DB Error: Error adding this collection. Collection entry <collection name> <version> already exist	Unable to add a collection.	Duplicate collection name entered. Verify the list of collection and then enter a name, which is unique.
DB Error: Internal error occurred	A db transaction interrupted.	Database connection is lost for network error. No suggestion.
DB Error: delete failed because there are granules associated with this theme	Unable to delete a theme.	There are granules associated with this theme. Disassociate granules from this theme and then delete it.

Glossary

AMASS	File Storage Management System (files, volumes, media, drives, and jukeboxes). Integrated with Volserv (volume serving system) and Ingres (database management system) COTS products.
ASTER On-demand Product Request Form	ODFRM is a World Wide Web (WWW) based form that allows users to enter and submit ASTER On-Demand processing orders.
AutoSys/AutoXpert	COTS software that provides job scheduling and management. Also provides graphics to monitor, analyze, forecast and plan AutoSys implementations.
Baseline Manager	Baseline Manager package used to maintain records of baselined operational system configurations. (see also XRP-II)
Batch Insert Utility	The Batch Insert Utility is a command line interface that allows operators to insert granules residing in or outside of (non-ECS granules) the ECS archive into the Data Pool.
Bulk Metadata Generation Tool	The EcOsBulkURL Utility allows operators to make available the File Transfer Protocol (FTP) Universal Resource Locators (URLs) in the Data Pool to the ECS Clearing House (ECHO).
ClearCase	Software change manager that stores ECS custom software and science software, regulates access to the files, controls and logs file changes, performs software builds, and maintains a record of the build. Maintains a library of software deployed to sites.
CMI	Cryptographic Management Interface. Used to create accounts for given user names and passwords.
Crack	Used to determine if passwords are secure.
DAR	Data Acquisition Request for ASTER instrument data.
Database Installation and Maintenance Scripts	A set of eleven standard database scripts have been created for the DDIST, INGEST, MSS, PDPS, SDSRV, STMGT, and SUBSRV subsystems to facilitate database installation and database administration activities. These scripts are designed to be accessible from both the command line and the Stage Install function of ECSAssist.

Data Dictionary Maintenance Tool	Tool that allows the operator to maintain the ECS Data Dictionary.
Data Distribution Requests GUI	Monitors and controls the request for data distribution (for FTP Pushes and FTP Pulls only).
Data Ingest	Provides a means for external providers to ask for ECS ingest services.
Data Ingest GUI	The Data Ingest tool allows the operators to view past ingest activities, monitor and control ingest requests, modify system and external data provider parameters, and initiate hard media ingest.
Data Pool Access Statistics Utility – Rollup Scripts	The Data Pool Access Statistics Utility (DPASU) provides the ECS Operations Staff with several capabilities related to collecting access statistics for the Data Pool database. The DPASU encompasses two types of scripts: rollup and maintenance. The rollup scripts read and parse access logs to compile statistics and store those records in the Data Pool database, while the maintenance scripts backup, restore, and delete data in the related Data Pool database tables.
Data Pool Access Statistics Utility – Maintenance Scripts	The Data Pool Access Statistics Utility (DPASU) provides the ECS Operations Staff with several capabilities related to collecting access statistics for the Data Pool database. The DPASU encompasses two types of scripts: rollup and maintenance. The maintenance scripts backup, restore, and delete data in the related Data Pool database tables.
Data Pool Cleanup Utility	The Data Pool Cleanup utility provides a mechanism for the ECS Operations Staff to remove expired granules and their associated metadata and browse files from the Data Pool disks and corresponding Data Pool database inventory.
Data Pool Maintenance GUI	The DPM GUI provides an operator interface to monitor the current status of Data Pool Inserts and to maintain specific Data Pool parameters. This GUI manages ECS and Non-ECS data collections.

Data Products

Designated as standard or special data products, generated as a part of research investigation using EOS data. The various levels of data are defined as follows (1995 MTPE/EOS Reference Handbook):

Level 0 - Reconstructed, unprocessed instrument/payload data at full resolution; any and all communications artifacts, e.g., synchronization frames, communications headers, duplicate data removed.

Level 1A - Reconstructed, unprocessed instrument data at full resolution, time-referenced, and annotated with ancillary information, including radiometric and geometric calibration coefficients and geo-referencing parameters, e.g., platform ephemeris, computed and appended but not applied to the Level 0 data.

Level 1B - Level 1A data that have been processed to sensor units (not all instruments will have a Level 1B equivalent).

Level 2 - Derived geophysical variables at the same resolution and location as the Level 1 source data.

Level 3 - Variables mapped on uniform space-time grid scales, usually with some completeness and consistency.

Level 4 - Model output or results from analyses of lower level data (e.g., variables derived from multiple measurements).

Data Server

Software associated with storing earth science and related data, searching and retrieving the data, and supporting the administration of the data, hardware devices, and software products.

DDTS

Change request manager used to compose, submit, report and track status of proposals to change ECS resources electronically.

ECS Assistant

The ECS Assistant (ECSAssist) is a custom program that simplifies the process of installation, testing and management of ECS. The tool is for use in installing software and maintaining the information related to that software. Only the Subsystem Manager function of ECSAssist should be used in the ECS operational environment.

ECS Desktop

Simulates Common Desktop Environment (CDE); interface that acts like a file manager, allowing launch of applications, creation of directories and moving/copying/ deleting files.

ECS Registry GUI	The ECS Registry GUI is a management tool for ECS applications allowing users to create and update parameter information. Registry data is stored in a registry database.
Email	Service that manages electronic mail messages for DAAC operators.
EOSView	A custom HDF file verification tool. Displays HDF files and HDF-EOS data.
Event Log	The Event Log Database resides at each ECS site. It records status and error messages generated by the various ECS applications at the site. The Event Log Browser is used to view the status and error messages.
Event Log Directory	This directory resides on every computer platform and contains the log files used by applications to report status and error messages. Log files in the Event Log Directory are loaded into the Event Log Database on a periodic basis.
FLEXIm	COTS for the administration of licenses.
GCMD Data Export	Extracts Data Interchange Format (DIF) from the SDSRV inventory database to the Global Change Master Directory (GCMD).
Granule Deletion Administration Tool	The Granule Deletion Administration Tool provides the ECS Operations Staff with the capability to delete granules using a command line interface. The granules can be deleted from both the inventory and archive or just the archive. Granules are not physically deleted from the archive. The directory entry is deleted so the files cannot be accessed. The physical storage occupied by the deleted granules is not reclaimed through this operation.
IDL	Interactive data language used to interactively visualize and analyze scientific and engineering data products.
Ingest GUIs	Allows monitor and control of Ingest requests, modification of system and external data-provided parameters and initiate hard media ingest. An HTML interface allows for submission of ingest requests for processing.
Inventory, Logistics and Maintenance (ILM) Manager	Supports M&O in maintaining records that describe all inventory components, structures, and interdependencies.

iPlanet Web Server	The iPlanet Web Server, Enterprise Edition 6.0 is a multi-process, multi-threaded, secure web server built on open standards. It provides high performance, reliability, scalability, and manageability for any size enterprise, and it includes modules for creating and managing Web content, for extending or replacing functions of the server (e.g., through Java servlets and JavaServer pages), and for providing application-specific services such as security and access control. In ECS, the iPlanet Web Server is used by several subsystems to access HTML files and to service web-based applications.
ISQL	SQL command parser utility used to interact with a SQL server and databases on a SQL server.
Main Window Manager	Provides login to UNIX and ECS, authenticates the user and brings up the appropriate ECS Desktop based upon the operator role.
Microsoft Office Professional	A collection of applications working together as if it were a single program. The collection includes Word (for text and graphical processing), Excel (a spreadsheet) and PowerPoint (making graphics/presentations) programs.
Netscape Communicator	World Wide Web (WWW) browser. Used to obtain information from other sources.
Networker	Tool used by system administrators to perform site-wide system backups, except databases.
Order Manager GUI	The Order Manager (OM) Graphical User Interface (GUI) provides the operators with direct access to the OM database. The GUI allows operators to view and modify requests that have been placed on hold by the Order Manager because they require operator intervention and resubmit requests or portions of a request that failed. For Synergy III, the GUI is an addition to the existing System Management Subsystem (MSS) Order Tracking GUI and the Data Distribution (DDIST) GUI rather than a replacement for them.
Order Manager Command Line Utility	The Order Manager Command Line utility provides a mechanism by which the ECS Operations Staff can submit order requests into the Order Manager System (OMS) database directly without knowing whether the Order Manager Server is up or down.
Order Tracking	User services tool that tracks order status and request status.

PIPRGenerator User Interface	The PIPRGenerator is the command line interface for the Production Request Editor. The PIPRGenerator allows the user to create and activate a number of Routine Production Requests using information contained in an input file. The input file contains the PgeIds and GEOIds for the PGEs and primary input granules, respectively, for the Production Requests to be created.
Process Control File	Specifies the names and locations of files used by science software executables, and defines the correspondence between the file specifications and the logical identifiers used by the science software to reference the specified files.
Production Strategies	Used to tailor the priority of the Production Requests.
Production Planning Workbench	Used to include a Production Request in a plan and receive a forecast of the resources needed based on past experience with the same kind of request.
Product Distribution System Standalone User Interface	<p>PDSSA is a package developed by the United States Geological Survey (USGS) at the Eros Data Center (EDC). PDSSA has been integrated with ECS to support the distribution of ordered product data to science users for delivery on 8mm or DTF tape, Digital Linear Tape (DLT), DVD-ROM and CD-ROM media.</p> <p>PDSSA interfaces with the ECS Order Tracking function to provide status on the progress of filling an order and with the ECS Science Data Server (SDSRV) for obtaining the product to be delivered.</p>
Production Request Editor	Allows the Operator to submit production Requests, which produce data products.
Quality Assurance Monitor	The ECS Quality Assurance (QA) Monitor processing capabilities enable DAAC operators to perform duties associated with DAAC QA activities. The ECS QA Monitor GUI is the user-interface for entering data requests and displaying data, status, and error messages. The QA Monitor does not produce data products, but communicates with the science data server to retrieve data that have been previously archived. The ECS QA Monitor assists in manual quality assurance activities such as querying and retrieving data granules, visualizing data products and updating metadata.

Regenerate Failed PDR Tool	The Regenerate Failed PDR tool provides the ECS Operations Staff with the capability to generate a Product Delivery Record (PDR) for each failed granule in a PDR and copy the generated PDRs to an Ingest polling directory using a command line interface. The purpose of the tool is to provide a means for the ECS Operations Staff to easily resubmit only failed granules to Ingest polling, rather than having to manually edit the original PDR file or resubmit all of the granules, which would create duplicate granules in the archive.
Remedy Action Request System	Provides DAACs with a trouble ticketing service to classify, track and report system problems.
Replication Server	Maintains warm standby copies of application data and replicates changes among databases at different sites.
Resource Planning	Used to plan the allocation of DAAC resources.
Restricting ESDT and Granule Access	The two scripts <i>EcDsSrUpdateESDTAccess</i> and <i>EcDsSrUpdateQATimeRange</i> provide DAAC operations staff the capability to adjust how the Science Data Server restricts <i>Acquire</i> access to granules. When evaluating a user's permission to <i>Acquire</i> a granule, the Science Data Server uses the value of the NASA user attribute stored in the User Profile system. The first script, <i>EcDsSrUpdateESDTAccess</i> , allows the DAAC operator to restrict an entire ESDT/Data Collection to one or more of the specific NASA user types stored in the User Profile system. The second script, <i>EcDsSrUpdateQATimeRange</i> , allows individual granules to be restricted based upon the granule's QA flag values and the type of NASA user making the request.
Science Data Server GUI	The Science Data Server GUI provides the operator two major functions, the management of Earth Science Data Types (ESDTs) and the management of all types of requests that the Science Data Server operator is involved with.
Science Data Server Command Line Interface	The Science Data Server Command Line Interface (SCLI) tool provides the Product Distribution System (PDS) with the capability to acquire Landsat and Non Landsat products via an FtpPush, in fulfillment of orders placed by ECS users for those products via DTF tape, 8mm tape, Digital Linear Tape and CD-ROM/DVD. The SCLI tool accomplishes this by providing a command line interface for the Science Data Server acquire request.
Sniffers	Monitors network traffic for collisions and troubleshooting.

SQL Server	A SQL Server is a set of cooperating processes that manage multiple Sybase databases and multiple users.
SSI&T Manager	Allows check in and verification of science software delivered by the instrument teams at the Science Computing Facilities. Provides access to all COTS tools and custom applications that are part of the SSI&T environment.
Storage Management Control GUI	The Storage Management Control GUI enables operations to set and modify configurations of various server types (e.g., 8mm tape, Archive Server and DTF tape), manage data locations within the archive and on disk, configure stacker slots, display storage events which possibly require operator actions, and view backup failures with the capability to restart a backup operation.
Subscription Editor	Allows the operator to manually enter Subscriptions to the Subscription Server.
Subscription Server	Allows users to register their events related to a certain type of data.
Sybase Replication Server	Maintains warm standby copies of application data and replicates changes among databases at different sites.
TCP Wrappers	Monitors and controls access to network services on a host.
Tripwire	An intrusion detection tool that monitors files for changes.
Tuple	Data reflecting unique strings of information associated with and descriptive of an event (e.g., names, identifier numbers, data types).
Update Granule	The Update Granule Utility provides the ECS Operations Staff with a command line interface to update the expiration date and optionally the retention priority of granules in the Data Pool inventory. The granules in the Data Pool inventory can be ECS or non-ECS granules.
User Account Management GUI	Tool used by DAAC operators to process new accounts and manage existing ones.
V0 Gateway Metadata Import	Extracts ESDT data into an export file, maps the valids to the V0 domain and stores it in the V0 Gateway database.
WhatsUp Professional	WhatsUp Professional is a graphical network mapping, monitoring, and notification COTS application. The DAAC network administrators use it to monitor network devices and the services on those devices and to get feedback on their network's performance.

Whazzup GUI

The Whazzup GUI is a tool that monitors and displays the execution status and related performance statistics associated with ECS programs. It is implemented using the Perl language and uses a CGI-based web interface to display information to the user.

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Abbreviations and Acronyms

A

ACS	Automated Cartridge System
ACSLs	Automated Console System for Library Services
ADC	Affiliated Data Center
AI&T	Algorithm Integration and Test
AITTL	Algorithm Integration and Test CSCI (of DPS)
ALOG	Application Log file
AM-1	See Terra
AMASS	Archival Management and Storage System
AML	Automated Media Library
AMU	Automated Management Unit
ANSI	American National Standards Institute
AOI	Area of Interest
AOS	Area of Search
API	Application Program (or programming) Interface
AR	Action Request
ARS	Action Request System
AS	ASTER
ASBP	AIRS Summary Browse Products
ASCII	American Standard Code for Information Exchange
ASTER	Advanced Spaceborne Thermal Emission and Reflection Radiometer

B

BB	Bulletin Boards
BIS	Baseline Information System
BLM	Baseline Manager
BOM	Bill of Material

BMGT Bulk Metadata Generation Tool

C

CAP Cartridge Access Port

CCB Configuration Control Board

CCR Configuration Change Request

CCS Control Center System Middleware, a custom code replacement for DCE

CD Cartridge Drives

CD-ROM Compact Disk -- Read Only Memory

CDDTS Clear Distributed Defect Tracking System

CDE Common Desktop Environment

CDRL Contract Data Requirements List

CE CERES

CFG Configuration File

CGI Common Gateway Interface

CHUI Character-based User Interface

CI Configuration Item

CID Control Item Identifier

CIDM Client, Interoperability and Data Management Subsystem group

CLI Command Line Interface

CLS Client Subsystem (of SDPS)

CM Configuration Management

CMI Cryptographic Management Interface

COTS Commercial Off-The-Shelf

CPIO Copy In and Out

CPU Central Processing Unit

CRM Change Request Manager

CSCI Computer Software Configuration Item

CSDT Computer Science Data Type

CSMS Communications and Systems Management Segment

CSS Communications Subsystem (of CSMS)
CSV Comma Separated Variable

D

DAAC Distributed Active Archive Center
DAO Data Assimilation Office (at GSFC)
DAP Delivery Archive Package
Delivery Algorithm Package
DAR Data Acquisition Request
DAS Data Availability Schedule
Distributed Archive Server
DB DataBase
DBA Database Administrator
DBMS DataBase Management System
DBO Database Owner
DCCI Distributed Computing Software CSCI (of CSS)
DDICT Data Dictionary CSCI (of DMS)
DDIST Data Distribution Server CSCI (of DSS)
DDMT Data Dictionary Maintenance Tool
DDTS Distributed Defect Tracking System (COTS)
DEG Degrees
DES Data Encryption Standard
DHWM Data High Water Mark
DID Data Item Description
DIF Data Interchange Format
DLL Dynamically Linked Libraries
Data Link Library
DLT Digital Linear Tape
DLWM Data Low Water Mark

DMS	Data Management Subsystem (of SDPS)
	Degrees, Minutes and Seconds
DNS	Domain Name Service
DO	Derived Objects
DPAD	Data Pool Action Driver
DPASU	Data Pool Access Statistics Utility
DPIU	Data Pool Insert Utility
DPL	Data Pool
DPM	Data Pool Maintenance
DPR	Data Processing Request
DPS	Data Processing Subsystem (of SDPS)
DSKT	Desktop CSCI (of CLS)
DSS	Data Server Subsystem (of SDPS)
DTS	Distributed Time Service

E

EA	External Ancillary
EASI	ECS Assist System Installation
EBIS	ECS Baseline Information System
ECHO	ECS Clearing House
ECN	Equipment Control Number
ECS	EOSDIS Core System
ED	EDOS
EDC	EROS Data Center (DAAC)
EDF	ECS Development Facility
EDGRS	ESDIS Data Gathering and Reporting System
EDHS	ECS Data Handling System
EIF	Entry Interface Facility
EIN	Equipment Inventory Number
EOC	EOS Operations Center (ECS)

EOS	Earth Observing System
EOS-AM	EOS Morning Crossing (Descending) Mission -- see Terra
EOSDIS	Earth Observing System Data and Information System
ESDIS	Earth Science Data and Information System
ESDT	Earth Science Data Type
ESN	EOSDIS Science Network
ESSM	Enterprise SQL Server Manager
ETAC	EMASS Technical Assistance Center

F

FDDI	Fiber Distributed Data Interface
FIFO	First In-First Out
FQDN	Fully Qualified Domain Name
FSMS	File Storage Management System
FTP	File Transfer Protocol

G

GB	Giga-Byte
GCMD	Global Change Master Directory (not developed by the ECS project)
GFE	Government Furnished Equipment
GMT	Greenwich Mean Time
GSFC	Goddard Space Flight Center (DAAC)
GTWAY	V0 Interoperability Gateway CSCI (of DMS)
GUI	Graphical User Interface
GV	Ground Validation

H

HAIF	HDF ASCII Interchange Format
HDF	Hierarchical Data Format
HDF-EOS	an EOS proposed standard for a specialized HDF data format

HEG	HDF-EOS to GeoTIF Converter
HLE	High Level Event
HMI	Human Machine Interface
HTML	HyperText Markup Language
HTTP	Hypertext Transport Protocol
HWCI	Hardware Configuration Item

I

I&T	Integration and Test
I/O	Input/Output
ICD	Interface Control Document
ICMP	Internet Control Message Protocol
ID	IDentification
IDG	Infrastructure Development Group
IDL	Interactive Data Language
ILM	Inventory, Logistics and Maintenance Manager
IMSL	International Math and Statistics Library
INCI	Internetworking CSCI (of CSMS)
INGST	Ingest Services CSCI (of INS)
INS	Ingest Subsystem (of SDPS)
IOS	Interoperability Subsystem
IP	Internet Protocol (address)
IR1	Interim Release One
IRD	Interface Requirements Document
ISO	International Standards Organization
ISQL	Interactive Structured Query Language
ISS	Internetworking Subsystem (of CSMS)
IT	Instrument Team

J

JDT	Java Data Acquisition Request (DAR) Tool
JIL	Job Information Language
JM	Job Management
JPL	Jet Propulsion Laboratory

L

L0-L4	Level 0 (zero) through Level 4 data
LAMS	Landsat 7 Archive Management System
LAN	Local Area Network
Landsat	Land Remote-Sensing Satellite
LaRC	Langley Research Center (DAAC)
LCU	Library Control Unit
LDAP	Lightweight Directory Access Protocol
LMU	Library Management Unit
LS	LandSat
LSM	Library Storage Module
LTM	Log Transfer Manager

M

M&O	Maintenance and Operations (group)
MB	MegaBytes (10^6)
MCF	Metadata Configuration File
MCI	Management Software CSCI
MDA	Management Data Access
MFR	Manufacturer
MI	MISER
	Machines Impacted
MIN	Minutes

MISR	Multiangle Imaging SpectroRadiometer
MLCI	Management Logistics CSCI
MM	Millimeter
MO	MODIS
MODIS	Moderate-Resolution Imaging Spectrometer
MOPITT	Measurements of Pollution in the Troposphere
MP	MOPITT
MSS	System Management Subsystem (of CSMS)
MTPE	Mission to Planet Earth
MUA	Mail User Agent
MWO	Maintenance Work Order

N

N/A	Not Applicable
NBSRV	Spatial Subscription Server
NCR	Non-Conformance Report
NCS	Network Computing System Netscape Commerce Server
NESDIS	National Environmental Satellite Data and Information Service
NFS	Network File System
NMC	National Meteorological Center (NOAA)
NOAA	National Oceanic and Atmospheric Administration
NSBRV	Spatial Subscription Server CSCI
NSIDC	National Snow and Ice Data Center (DAAC)
NW	NetWorker

O

ODFRM	On-Demand Product Request Form (of CLS)
ODL	Object Description Language
OEM	Original Equipment Manufacturer

OODCE	Object Oriented DCE
OM	Order Manager
OMS	Order Manager Server
OPER	Operator
OPS	Operations
OS	Operating System
OSF	Open Systems Foundation
OSI	Open System Interconnect
OTS	Off-the-Shelf

P

PAN	Production Acceptance Notification
PCF	Process Control File
PCFG	Parameter Configuration File
PDF	Portable Document Format
PDPS	Planning & Data Processing Subsystems (of SDPS)
PDR	Production Data Request Product Delivery Record
PDS	Production Data Set Product Distribution System
PDSJM	PDS Job Monitor
PDSMI	PDS Maintenance Interface
PDSOI	PDS Operator Interface
PDSSA	PDS Standalone
PFC	Prohibited Function Checker
PGE	Product Generation Executable
PLANG	Production Planning CSCI (of PLS)
PLS	Planning Subsystem (of SDPS)
PM	Preventative Maintenance
PO	Purchase Order

POSIX	Portable Operating System Interface for Computer Environments
PR	Production Request
PRS	Primary Replication Server
PRONG	Data Processing CSCI (of DPS)
PVC	Performance Verification Center
PWB	Planning Work Bench (of PLS) Production Planning Workbench

Q

QA	Quality Assurance
QC	Quality Control
QRU	Query/Retrieve/Update

R

RAID	Redundant Array of Inexpensive Disks
RAM	Random Access Memory
RMA	Reliability, Maintainability, Availability
ROC	Read-Only Cache
RRS	Replicate Replication Server
RSA	Replication System Administration
RSI	Replication Server Interfaces
RSM	Replication Server Manager
RSSD	Replication Server System Database
RTF	Rich Text Format
RTU	Rights To Use

S

SA	System Administrator SAGE III
SAA	Satellite Active Archive

SAGE	Stratospheric Aerosol and Gas Experiment
SBSRV	Subscription Server (of CSS)
SCF	Science Computing Facility
SCLI	Science Data Server Command Line Interface
SCSI	Small Computer System Interface
SDP	Science Data Processing
SDPF	Sensor Data Processing Facility (GSFC)
SDPS	Science Data Processing Segment (ECS)
SDPTK	SDP Toolkit CSCI
SDS	Science Data Standards (Science Data Group data used in EOSView)
SDSRV	Science Data Server CSCI (of DSS)
SEC	Seconds
SGI	Silicon Graphics, Inc.
SMC	System Management Center (ECS – at GSFC)
SMTP	Simple Mail Transport Protocol
SNMP	Simple Network Management Protocol
SP	Space Pool
SPRHW	Science Processing HWCI
SQL	Structured Query Language
SQR	SQL Report Writer
SSH	Secure Shell
SSI&T	Science Software Integration and Test
SSM/I	Special Sensor for Microwave/Imaging (DMSP)
SSO	System Security Officer
SSS	Spatial Subscription Server
SST	Sea Surface Temperature
SSAP	Science Software Archive Package
STK	Storage Tek
STMGT	Storage Management CSCI (of DSS)
SYS	System

T

TAR	Tape Archive
TCP/IP	Transmission Control Protocol/Internet Protocol
TDP	Tabular Datastream Protocol
Terra	EOS AM Project spacecraft 1, morning spacecraft series -- ASTER, MISR, MODIS and MOPITT instruments (formerly called AM-1 spacecraft)
TOMS	Total Ozone Mapping Spectrometer
TONS	TDRS On-board Navigational System
TT	Trouble Ticket

U

UFS	UNIX File System
UR	Universal Reference
URL	Universal Resource Locator
USGS	United States Geological Survey
UT	Universal Time
UTC	Universal Time Code
UUID	Universal Unique Identifier

V

V0	Version 0
VATC	Verification and Test Center
VOB	Version Object Base

W

WAIS	Wide Area Information Server
WAN	Wide Area Network
WKBCH	Workbench CSCI (of CLS)
WWW	World Wide Web

X

xAR (generic) Acquisition Request

XML Extensible Markup Language

Y

Y2K Year 2000

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